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SAFELY SLEEPING?

**AN EXPLORATION OF MOTHERS' UNDERSTANDING OF SAFE
SLEEP PRACTICES AND FACTORS THAT INFLUENCE
REDUCING RISKS IN THEIR INFANT'S SLEEP ENVIRONMENT.**

Catherine Ellis

MSc RNT PG Cert. Med. Ed. RGN RM RHV PG Dip. HV

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Department of Mental Health and Wellbeing

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DECLARATION

I declare that this thesis is all my own work except where I have stated otherwise. Material from this thesis, specifically section 2.3 on behaviour change and health education interventions have been published in a book chapter identified in the author's publications below. Any views expressed in the thesis are those of the author. I can confirm that this thesis has not been submitted for a degree at any other university.

Catherine Ellis

PhD Student ID: 1058034

8th March 2019

“I cannot teach anybody anything. I can only make them think”

Socrates

ABSTRACT

In spite of widespread awareness of the risk factors for sudden unexpected death in infancy (SUDI), many infants continue to be exposed to a range of risks, and most deaths now occur in situations where risk reduction measures have not been followed. SUDI is also more likely to occur in families with identified vulnerabilities such as young maternal age, low educational achievement, smoking, alcohol and substance use. Families with these characteristics can be described as having a higher risk for SUDI and sudden infant death syndrome (SIDS). This study adopts a qualitative approach using Interpretative Phenomenological Analysis (IPA), to gain an understanding about the lived experience of young first-time mothers identified as being at increased risk for experiencing SUDI, their understanding of safe sleep practices, what factors influence their decision-making and behaviour in relation to their infant's sleep environment, and whether infant-care practices change over time.

A homogeneous sample of five first-time mothers, with identified characteristics known to increase the risk of experiencing SUDI, were recruited antenatally. Serial in-depth interviews were conducted during the antenatal and postnatal period. The interviews were transcribed, and data analysed to identify emergent, subordinate and superordinate themes.

Superordinate themes of *transition*, *the construction of knowledge*, and *fractured application*, revealed that adolescence was the context for understanding how information shared with them was received and processed, and ultimately how that knowledge was translated and applied. Filiano and Kinney's (1994) triple-risk hypothesis has been enhanced to explain the emergent theories generated from this inductive research, adding a new domain of 'social vulnerability'. This new domain recognises the unique contribution that this exploratory research makes in providing a deeper understanding of the lived experience of vulnerable young mothers; and how this context impacts on their decision-making with regard to infant-care practices, and how this may increase the risk of SIDS to their infant in the sleep environment.

DEFINITIONS

Sudden unexpected death in infancy (SUDI) is defined as ‘the death of an infant which was not anticipated as a significant possibility during the 24 hours before the death or where there was a similarly unexpected collapse leading to or precipitating the events which led to death’ (Fleming et al., 2000: P8). These deaths may be explained in terms of, for example, infection, congenital malformation or homicide, or they may remain unexplained, and labelled as sudden infant death syndrome.

Sudden infant death syndrome (SIDS) is the diagnosis given following the sudden unexpected death of an infant less than one year of age, with onset of the fatal episode apparently occurring during sleep, that remains unexplained after a thorough investigation, including performance of a complete autopsy and review of the circumstances of death and the clinical history (Krous et al., 2004: P235).

Unascertained is a term that has increased in use by pathologists where the opinion is that insufficient information exists about a case to label it as SIDS, or that a proportion of SUDI are suspicious or where identified risk factors for SIDS are known. There continues to be debate around the usage of the term and the literature suggests that the characteristics of deaths categorised as unascertained differ from those ascribed to SIDS (Limerick and Bacon, 2004).

Preventable death is defined as any child death in which modifiable factors may have contributed to the death. These are factors defined as those, where, if actions could be taken through national or local interventions, the risk of future child deaths could be reduced (DfE, 2015).

Infant mortality includes all deaths of infants from birth to 364 days old.

Infant mortality rate (IMR) is reported per 1,000 live births.

Neonatal period is the interval from birth to 28 days of age.

Perinatal period commences at 22 completed weeks (154 days) gestation and ends seven days after birth.

Perinatal mortality refers to the number of stillbirths and deaths in the first week of life (early neonatal mortality).

Co-sleeping is defined as the infant sleeping on the same surface (adult bed or sofa) with at least one adult.

Bed sharing is when the infant and parent(s) share the same bed.

LIST OF ABBREVIATIONS

CDR	Child Death Review
CDOP	Child Death Overview Panel
CESDI	Confidential Enquiry into Stillbirths & Deaths in Infancy
CG	Commissioning Group
CHIMAT	Child and Maternal Health Observatory
CMW	Community Midwife
DfE	Department for Education
DH	Department of Health
FNP	Family Nurse Partnership
FNPN	Family Nurse Partnership Nurse
FSID	Foundation for the Study of Infant Deaths (now The Lullaby Trust)
HBM	Health Belief Model
HV	Health Visitor
IMD	Index of Multiple Deprivation
IMR	Infant Mortality Rate
IPA	Interpretative Phenomenological Analysis
LSCB	Local Safeguarding Children Board
LSOA	Lower Super Output Area
NHS	National Health Service
SUDI	Sudden Unexpected Death in Infancy
SIDS	Sudden Infant Death Syndrome
SWISS	South West Infant Sleep Scene Study
TPB	Theory of Planned Behaviour

AUTHOR'S PUBLICATIONS

Sidebotham, P., Bates, F., Ellis, C. & Lyus, L. (2018) Preventive Strategies for Sudden Infant Death Syndrome. In: Duncan, J.R. & Byard, R.W. (Eds.) *SIDS Sudden infant and early childhood death: The past, the present and the future*. University of Adelaide Press. DOI: <https://doi.org/10.20851/sids>

AUTHOR'S PRESENTATIONS

Ellis, C. and Mbarushimana, A. (2016) *Artists and Academics: A social project to make PhD research available to the public*. Art Exhibition at Fargo Village, Coventry, 26th November 2016.

Ellis, C. (2017) *Engaging young, vulnerable mothers: Reflections of a novice researcher using IPA*. Poster presentation: The International Interpretative Phenomenological Analysis Conference. Glasgow Caledonian University, 18th & 19th May 2017.

Ellis, C. (2018). *Young Mothers: You Get 'That Look'*. Conference Presentation: BASPCAN. University of Warwick 10th April 2018.

Ellis, C. (2018) *Young Mothers: Their perceptions of risk for SIDS and associated infant-care practices*. ISPID International Conference. Glasgow University, 8th June 2018.

INTRODUCTION

There has been a significant decline in infant death rates over the past two decades since the prone sleeping position was identified as a major risk factor for sudden infant death syndrome (SIDS). Subsequent risk-reduction campaigns that focused on changing the sleep position of infants had a significant impact on reducing infant mortality during the early 1990s internationally. Since the initial impact of these campaigns on the infant mortality rate, the rate has plateaued, and the identification of other risk factors has taken on greater importance. Further reductions in the incidence of SIDS will depend on addressing these risks. Around 200 babies each year continue to die in England and Wales as SIDS; most of these unexplained deaths are now reported with modifiable risk factors such as unsafe sleep position or dangerous sleep environment, maternal smoking, alcohol and/or drug use. Following the introduction of child death reviews in 2008, we now have more information about the profile of infant mortality in the UK and most of these deaths now occur in a population identified with increased vulnerability, for example, young, single mothers with low educational achievement and low income.

Since the 1990s safe sleeping education has been delivered repeatedly to parents by professionals, and most mothers, even in high-risk groups, know what the safe sleep measures are. In spite of this, for whatever reason, many mothers do not follow them. Therefore, our current measures are not working, and if we are to reduce SIDS rates further, we need to modify our educational approach, which, in turn, means that we need a deeper understanding of what motivates and supports behaviour change in this vulnerable and high-risk group of parents.

I have worked with children and their families as a midwife and health visitor for over 25 years; and most recently, I have been working with the local inter-agency child death investigation team, supporting parents who have experienced the sudden and unexpected death of their infant. My experience of working with families who have suffered an infant death is that there is often at least one modifiable risk factor present, and often parents claim that they did not have knowledge of all the risk factors.

The evidence base underpinning the safe sleep and risk reduction health education to parents is compelling and is presented in chapter one. Research now needs to look to the parents, to understand their perception of these messages and what influences their decision making with regard to reducing the risks for their infant. This is an important and under-researched area. If we are to make progress in reducing unexplained deaths in infancy where modifiable risks have been identified, we need to understand how these parents arrive at decisions that can have a potentially devastating outcome.

This research adopted a qualitative approach using Interpretative Phenomenological Analysis (IPA). I have chosen IPA as the most appropriate methodology to gain an understanding about the lived experience of young, first-time mothers identified as being at increased risk of experiencing the sudden and unexpected death of their infant (SUDI). This study aimed to illuminate what was important for these young mothers in terms of their perception of, and the relevance to them, of the current risk-reduction messages; and to understand what influences their decision making over time. By understanding their unique perspective, data from this study may inform the debate on why parents fail to take up safe sleep practices and reduce risks to their infants.

Much of the literature has been concerned with the scientific deduction of isolating risk factors, defining the population most at risk, assessing parental knowledge, the delivery of health education strategies and the design of risk assessment tools; the voice of the vulnerable parent was largely absent in the literature. This research aimed to make a contribution to what we need to understand about how this group receives important messages in order to provide a more targeted approach to reduce modifiable risks in vulnerable families and understand what supports and motivates behaviour change and therefore, the potential to save more babies from preventable causes of death.

This thesis is organised into eleven chapters. The **first chapter** introduces the subject for investigation and provides a narrative review of the background literature and identification of the current risk factors for sudden unexpected death in infancy; and related parental behaviours that potentially increase the risk for the infant. **Chapter two** considers the social construct of the young mother and

presents several decision-making models that may be employed by young mothers. The chapter also considers external factors that may influence their behaviour and decision-making, incorporating some of the available cognitive behaviour models and frameworks that underpin and inform decision-making and behaviour change; the chapter concludes with comment on several effective educational interventions. **Chapter three** presents the philosophical and methodological basis for this research, and **chapter four** describes the methods and processes used to conduct this research. **Chapter five** presents a detailed description of the analysis process, with worked examples from each phase of analysis to illustrate the tenets of IPA. The emergent, sub and superordinate themes are identified, and the chapter concludes with a section introducing the participants with individual 'pen portraits' to provide context for the findings chapters. **Chapters six to eight** present the superordinate themes of *transition*, *the construction of knowledge*, and *fractured application*; each providing an interpretive account, grounded in the participant narrative. The discussion has been divided into two chapters: **chapter nine** critically reviews the background and justification for this research, considers the suitability of the methodology, and the challenges and benefits of the dual role of clinical professional and researcher, and considers the strengths and limitations of this research. **Chapter ten** discusses the research findings within the context of the extant literature and current health service provision. The chapter concludes with the presentation of an enhanced version of Filiano and Kinney's triple-risk model to explain the emergent theories generated from this inductive research, adding a new domain of 'social vulnerability' related to maternal characteristics that increase risk for their infant, identified from this research. **Chapter eleven** offers conclusions of this thesis, identifying the impact and contribution of new knowledge from this research, considers the implications and recommendations for policy, practice and future research, and concludes with details of the research dissemination strategy and final researcher reflections.

CHAPTER 1. IDENTIFICATION OF RISK FACTORS

1.0 Introduction

Sudden infant death syndrome (SIDS) is the leading cause of death in infants between the ages of one month to one year in developed countries (Blair et al., 2006; Hauck & Tanabe, 2008). In England and Wales, around 200 infants die suddenly and unexpectedly each year and are labelled as SIDS (Office for National Statistics, 2016a). Following the introduction of child death reviews in 2008, more detailed information is available regarding the profile of infant mortality. Unexplained infant deaths are now more likely to be reported with modifiable risk factors such as unsafe sleep position or hazardous sleep environment, maternal smoking, alcohol and/or drug use; and the majority of these deaths now occur in a population identified with increased vulnerability, for example, young, single mothers with low educational achievement and low income.

There is now a good understanding of the major risks for SIDS, and changes to sleep practices and other behavioural and environmental risks have been shown to significantly reduce the incidence of such deaths (Blair et al., 2009; Fleming, Blair and Pease, 2015; Hauck, 2014).

Since the early 1990s infant safe sleep education has been delivered repeatedly to parents by professionals, however recent research reports that mothers identified at increased risk of experiencing SIDS have less knowledge of risk reduction strategies than mothers considered to be low-risk (Caraballo et al., 2016; Pease et al., 2014 & 2017a), therefore, the current educational strategies are not working, or perceived as relevant, by high-risk mothers. In order to further reduce SIDS rates, educational approaches need to be modified, which, in turn, means that a deeper understanding of what motivates and supports behaviour change in this vulnerable and high-risk group of parents is required.

Research now needs to attend to the parents, to understand their perception of these messages and what influences their decision-making with regard to reducing the risks for their infant. If further progress is to be made in reducing unexplained deaths in infancy where modifiable risks have been identified, there is a need to

understand how these parents arrive at decisions that can have a potentially devastating outcome.

This narrative review of the literature, presented over these first two chapters, is drawn from the past two decades and includes the era since the first ‘back to sleep’ campaign in the UK in the early 90s. This review aims to highlight what is currently known about the risk factors for sudden infant death syndrome, to identify the groups at highest risk of experiencing SIDS and describe the behaviours of mothers who have been identified as having an increased risk for SIDS. A narrative review approach has been adopted to facilitate a broad exploration of all relevant areas of the literature from identification of risk factors for SIDS to the current social construct of young mothers, models of decision-making, behaviour change, and educational interventions aimed at improving the infant sleep environment.

In this chapter, each of the known risk factors has been identified and discussed separately using Filiano and Kinney’s (1994) ‘triple-risk hypothesis’ as the model to present the evidence. In several sections of this chapter, relevant literature is presented in tables, particularly where literature is extensive, and studies share similar findings. This approach was adopted to facilitate reading and clear presentation of relevant literature. This chapter presents the literature search strategy and the scientific background for my research. Chapter two presents the current social construct of young mothers, decision-making, and behaviour change interventions, and concludes with the justification for this research and the research questions.

1.1 Search Strategy

A structured search strategy was developed to return the most relevant material for this study (Appendix 1). A search grid was constructed using a modified population; exposure; comparator; outcome, (PECO) formulation (table 1.1) (Sackett et al., 2000; Stone, 2002). MEDLINE, CINAHL, PsychINFO, ASSIA, and The Cochrane Library databases (search results: table 1.2) were searched applying date parameters set for publications between 1995 (since the impact of the ‘Back to Sleep’ campaigns around 1990-92) to December 2014 for the initial searches,

and a subsequent literature search was conducted in August 2018 to identify new literature between January 2015 and August 2018. Where relevant, keyword searches were used in conjunction with Boolean operators, applied to expand and limit searches; and specific keywords and terms were truncated to facilitate extensive and efficient searching (Aveyard, 2014; Fink, 2014). Subject searches were also conducted to increase the retrieval of literature where keywords did not appear in the title of an article, increasing the probability that more relevant papers were retrieved. Searches returned multiple duplicate papers from all database searches on several of the topic searches, enabling confidence in the search strategy. Author and hand searching identified further relevant articles. Grey literature was searched using keywords and phrases in Google and Google Scholar which identified health education leaflets and safe sleep campaigns and interventions. Searches of health trusts and safeguarding board websites identified safe sleep campaigns and interventions, infant feeding policy documents, practice and service provision guidelines, and health education leaflets from healthcare providers, all of which provided an overview of service provision to young mothers nationally. Annual reports from child death overview panels were identified using safeguarding board websites, providing further evidence of SIDS deaths identified with modifiable factors. Presentations from relevant conference proceedings, for example, the International Society for the Study and Prevention of Perinatal and Infant Death, provided a source of current and emerging research findings relevant to the topic of interest, and similarly, relevant doctoral and masters theses were sourced via collaborative networks and thesis searching databases including ProQuest, EThOS and EBSCO Open Dissertations.

Search alerts and subscriptions were set up to continue to gather relevant publications, news and policy items that have been published during the study period (table 1.2). Where relevant, these have been included in the narrative review, for example, recent literature on e-cigarettes has been important to include for this research which led to a separate, specific literature search on e-cigarette use in pregnancy, the safety of the device and the effects of nicotine on

the developing foetus (table 1.3). As a consequence, the literature chapter remained a work in progress throughout the research period.

Adopting this broad search strategy approach returned a large volume of literature during the initial searches in 2014, over 3000 papers and documents were identified as potentially relevant. Duplicate articles were removed, and materials were selected for further reading if they included information on risk factors for SIDS, parental behaviours and/or infant-care practices that increased risk of SUDI and SIDS; or policy documents and annual reports relevant to SIDS and safe sleep practices; or safe sleep and risk reduction health education (table 1.2). The most relevant materials aligned to my literature search objectives were selected for further appraisal, including quantitative and qualitative papers, with small, good quality studies selected for interest and depth. Relevant critical appraisal checklists were used to evaluate the selected papers (CASP, 2014 a, b, c & d; Greenhalgh, 2010; Moule and Goodman, 2014: P146-9).

1.1.1 PECO

Table 1.1: PECO Formulation

Population	high-risk adults OR parents OR mothers AND
Exposure	smoking OR alcohol OR drug use/ misuse OR mental health OR infant sleep practices OR infant sleep equipment OR co-sleeping OR bed-sharing OR parenting OR childcare practices OR parental decision-making OR parent attitudes OR educational interventions OR media AND
Comparator	control group
Outcome	SUDI OR SIDS OR cot death OR crib death OR behaviour modification OR behaviour change.

1.1.2 Databases

MEDLINE, CINAHL, PsychINFO, ASSIA, and The Cochrane Library databases were searched; Web of Knowledge, Google (for Local Authority safe sleep campaigns and policies) and Google Scholar were searched periodically for material of

interest. Further relevant literature identified from on-going subscriptions was included as appropriate. PsychINFO returned similar results to ASSIA from identical search strategies and duplicates were removed. The main body of literature was identified using MEDLINE, CINAHL, and ASSIA. Foreign literature was included where an English translation was available; however only a small number of foreign language articles were considered, and after obtaining abstracts in English, these articles were discarded as not relevant or were foreign language publications of similar research articles available in English. An extensive range of relevant and interesting literature was generated during this study.

1.1.3 Database Search Results

Table 1.2: Database Search Results

Database	Returned	Duplicates Removed	Selected from Abstract	2014	2014 - 2018
MEDLINE	1687	0	630	235	62
ASSIA	469	115	183	68	2
CINAHL	366	46	104	58	4
PsychINFO	214	14	20	6	0
Cochrane	360	0	25	5	0
Total:	3096	175	962	375	68
2014: Selected after reading complete article/document				252	
2014 – 2018: Literature search update & selected hand searching, includes author alerts					34
Total Literature Included				286	

1.1.4 Specific Searches

In addition to the primary subject literature searches presented above, several further literature searches were conducted to support specific topic exploration during the course of this research project.

Table 1.3: Subject Specific Search Results

Subject area	Relevant articles
The lived experience of young mothers	35
Decision-making: <ul style="list-style-type: none">• <i>models</i>• <i>developmental aspects of</i>	22
e-cigarette usage in pregnancy/ safety of devices/ nicotine impact on the foetus	97
Educational interventions for SIDS risk reduction	61
Adolescence and Adolescent Brain Development	12
Total Additional Literature Included	227

1.2 Background

During the late 1980s, researchers investigating the sudden infant death syndrome (SIDS) identified that infants placed to sleep prone had a significantly increased risk of dying (Beal, 1988; Fleming, Gilbert and Azaz, 1990; Mitchell et al., 1991). Subsequent risk-reduction campaigns that focused on changing the sleep position of infants had a significant impact on reducing infant mortality in high-income countries during the early 1990s. Since the initial impact of these campaigns on the infant mortality rate, some countries have experienced a plateau in the decline, while in the UK, the rate continues to decline at a slower pace, and identification of other risk factors has taken on greater importance.

Around 200 infants die suddenly and unexpectedly each year and are labelled as SIDS in England and Wales (Office for National Statistics, 2016a). In 2014 there were 536 sudden unexpected infant deaths, 84% of these deaths occurred in infants aged between 28 – 364 days and 30% of these deaths happened in the

second month of the infant's life. Of these 536 unexpected deaths, 211 deaths remained unexplained following an autopsy and were recorded as SIDS or unascertained, accounting for 8% of all infant deaths that year (Office for National Statistics, 2016a). The period of highest risk for SIDS is between two and four months of age.

Sudden unexpected death in infancy (SUDI) is defined as 'the death of an infant which was not anticipated as a significant possibility in the 24 hours before the death or where there was a similarly unexpected collapse leading to or precipitating the events which led to death' (Fleming et al., 2000: P8). These deaths may be explained in terms of, for example, infection, congenital malformation or homicide, or they may remain unexplained, and labelled as sudden infant death syndrome (SIDS) or as unascertained. SIDS is the diagnosis given following the 'sudden unexpected death of an infant less than one year of age, with the onset of the fatal episode apparently occurring during sleep, that remains unexplained after a thorough investigation, including performance of a complete autopsy and review of the clinical circumstances of death and the clinical history' (Krous et al., 2004: P235). Unascertained is a term that has increased in use by pathologists where the opinion is that insufficient information exists about a case to label it as SIDS, or that a proportion of SUDI are suspicious, and it is, therefore, not appropriate to label all cases as SIDS, or where known risk factors for SIDS are present. There continues to be considerable debate around the use of the term and the literature suggests that the characteristics of deaths categorised as unascertained differ from those ascribed to SIDS (Limerick and Bacon, 2004). Although many of these deaths remain unexplained, there is now a good understanding of the major risks for SIDS, and changes to sleep practices and other behavioural and environmental risks have been shown to significantly reduce the incidence of such deaths (Blair et al., 2009; Fleming, Blair and Pease, 2015; Hauck, 2014).

1.2.1 Current Policy Context

In recent years, the reduction of both health inequalities and infant mortality has been prioritised in successive government reports and policy documents (DH,

2009; DH, 2010a; DH, 2013; DH, 2007; Marmot, 2010). Infant mortality reflects the state of a nation's health, and currently, the UK has one of the highest infant mortality rates in Western Europe (Wolfe et al., 2014). Wolfe et al. (2014: P2) in their report, *Why Children Die*, identify that in the UK, the 'infant death rate is particularly high, that there are marked social inequalities in death rates and that many of the causes and determinants of child deaths are preventable'. The public health outcomes framework for England for 2013–2016, set out in the Department of Health's publication *Healthy lives, healthy people: Improving outcomes and supporting transparency* (DH, 2013), provided a framework for local government, communities and health services to measure and improve health outcomes for all sections of society, both locally and nationally. The priorities outlined in this document are to improve healthy life expectancy and reduce inequality between communities. A number of the framework indicators relate to relevant risk factors for SIDS, aiming to reduce low birth weight babies, promote breastfeeding, reduce maternal smoking and conceptions to under 18-year-olds (domain 2); increase population vaccine coverage (domain 3) and to reduce infant mortality (domain 4). While service provision is required to achieve these goals, the primary responsibility falls to the individual to modify their behaviour to achieve improvement in these outcomes.

There are a number of programmes of work to support maternal and child health service delivery, and achievement of these outcomes; the healthy child programme (DH, 2009), the Family Nurse Partnership (Olds, 2006; Olds et al., 1986), the Implementation Plan to reduce health inequalities and infant mortality (DH, 2010b), and relevant supporting guidance on smoking, obesity and pregnancy from the National Institute for Health and Care Excellence (NICE, 2015). However, it cannot be ignored that the provision of these universal and targeted services has a substantial resource requirement. Financial austerity, combined with the growing burden of adult social care, means that funds are stretched across competing priorities. In Coventry, the current provision of children's centres and the number of services they provide is under review. This valuable service provision is likely to be re-designed and 'consolidated', with the possible loss or reduction in some service provision that supports parents in the most deprived

areas of Coventry. Often these resource cuts have the greatest impact on the most disadvantaged groups in society, the very groups that the current government policies are aiming to 'help'.

One particularly noteworthy development has been the introduction of the Child Death Review process that became a statutory requirement in England and Wales in 2008 (DfE, 2006; RCPATH & RCPCH, 2004). Following a number of miscarriages of justice, concerns were raised about the lack of any requirement to investigate the circumstances where infants died suddenly and unexpectedly. Consequently, in 2003, The Royal College of Pathologists and The Royal College of Paediatrics and Child Health established a working group to review how sudden unexpected deaths in infancy should be investigated and a standardised child death investigation process was published in 2004 (RCPATH & RCPCH, 2004). This process allows for the systematic collection of data on all sudden and unexpected infant deaths and has provided valuable data to inform local and national public health strategies. Although the child death investigation process offers a standardised procedure, local implementation across England and Wales can vary significantly. In summary, the key public health messages are to modify behaviours that increase the risks to maternal and child health such as smoking, alcohol and drug consumption and unhealthy eating and increase uptake of healthy behaviours such as breastfeeding, immunisation, and safe infant sleep practices. Also, since the introduction of the child death review process, more detailed information is available regarding the circumstances of infant deaths and associated modifiable risk factors. All these measures are intended for whole family and long-term health benefit and will have an impact on reducing the risks for SIDS, potentially, further reducing infant mortality in the future.

1.2.2 Modifiable risks

Since the introduction of the statutory multi-agency investigation into sudden unexpected child deaths in England in 2008 (DfE, 2006; RCPATH and RCPCH, 2004), SIDS cases are now more likely to be reported with identified and modifiable risk factors (Blair et al., 2009; Coventry, Solihull and Warwickshire SCB, 2014; DfE,

2014; Garstang et al., 2016); therefore, many of these deaths are deemed potentially preventable.

The main recognised risk factors now can be divided into the modifiable: smoking, dangerous co-sleeping, inappropriate bedding, parental alcohol and drug use; and non-modifiable, for example, young, single mothers (Blair et al., 2009; DfE, 2014; Office for National Statistics, 2015). Recent national aggregated data from Child Death Overview Panel (CDOP) reports show that where the cause of death is recorded as SIDS, 57% of those cases had modifiable factors identified (DfE, 2014). For example, in a sub-region of the West Midlands, from 34 SIDS reviewed between 2008 – 2014, 31 (90%) were identified with modifiable risk factors and all deemed preventable deaths. In 17 (57%) of those SIDS deaths there was evidence that parent(s) were given clear safe sleeping advice by a health professional which was not followed, and in many of these cases, the parents could be considered as vulnerable and/or leading chaotic lives (Coventry, Solihull and Warwickshire SCB, 2014). A more extensive study of child death reviews in the West Midlands found in 65 SUDI, 69% remained unexplained and of these, 83% were reported with identified risk factors (smoking, alcohol and drug use, co-sleeping, unsafe sleep environment, and mental health issues); 79% of these deaths were considered potentially preventable by CDOPs (Garstang et al., 2016). As a result of the detailed child death investigation process, we also have more information about the families who experience a sudden infant death, which is comparable with other statistical sources.

1.2.3 Characteristics of Vulnerable Families

Significant inequalities have been revealed in the profile of infant deaths, with the most deprived and vulnerable populations at highest risk for experiencing an infant death (DH, 2010b; Fleming, Blair and Pease, 2015; Office for National Statistics, 2015). Researchers investigating SIDS have identified that these populations are more likely to engage in behaviours that increase the risk to their infants; such as smoking, alcohol and drug use. Moreover, young mothers are disproportionally represented, demonstrate low educational achievement and are less likely to breastfeed (Ball et al., 2012; Blair et al., 2006a&b; Gilbert et al., 1995;

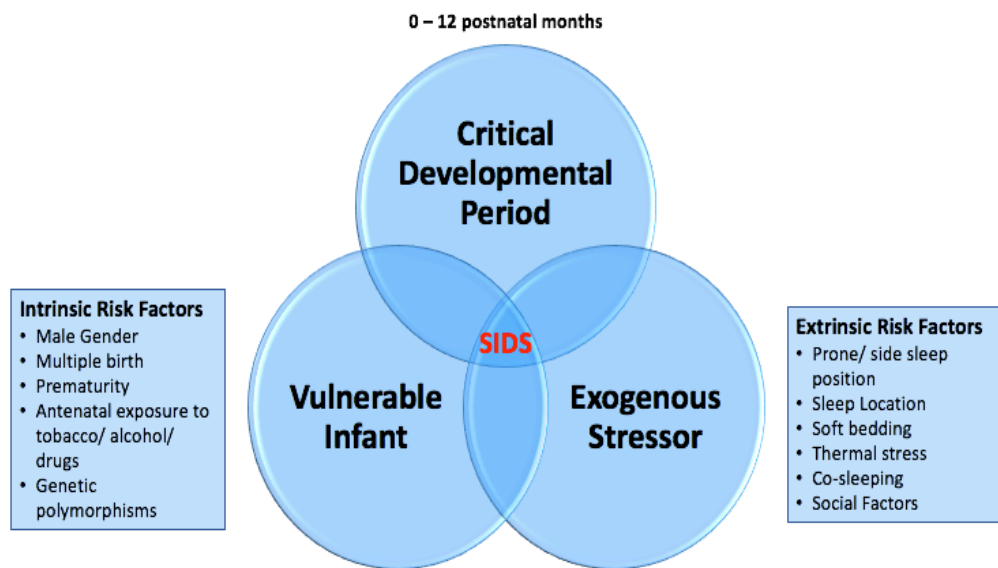
Hauck and Tanabe, 2008; McMillan et al., 2009; Shrivastava, Davis and Davies, 1997; Spencer and Logan, 2004; Venneman et al., 2009). Although young motherhood and social deprivation are considered non-modifiable factors, there is an ethical argument that these factors could be modified through addressing poverty and social inequalities more effectively through social policy. The Teenage Pregnancy Strategy (DCSF, 2010), for example, a complex multi-component policy intervention has achieved a significant reduction in the teen conception and birth rates in the UK since its implementation in 2000. It is beyond the scope of this study to address this issue in depth; however, it cannot be ignored that the effects of living in poverty and experiencing social marginalisation are likely to have a significant impact on young mothers and provides the basis of the cultural context of their lifestyle and parenting choices. Having identified the risk factors that increase the risk for SIDS, and vulnerability for SIDS within families, it is essential to recognise the risks that can be modified. Further reductions in the incidence of SIDS will depend on identifying vulnerability and addressing known modifiable risks (Blair et al., 2009; Hauck, 2014). Using a model to organise risk factors into domains can be useful in assessing and identifying risks for individual infants and families.

1.2.4 Triple Risk Hypothesis

In 1994 Filiano and Kinney presented their “triple-risk hypothesis” which is currently used to construct a contextual understanding of SIDS. This model comprises, 1) a vulnerable infant (an infant with a brain abnormality for example); 2) a critical developmental period in homeostatic control (rapid developmental changes occur during the first few months of an infant’s life, some of these changes may temporarily affect processes such as breathing and heart rate control, destabilising these processes); and 3) an exogenous stressor (such as being placed prone to sleep, overheating or having an infection). Filiano and Kinney also emphasise the antenatal origin of foetal developmental risk factors contributing to the vulnerable infant, for example, antenatal smoking or alcohol consumption can negatively impact the development of certain parts of the foetal brain that would only be identified at autopsy (Duncan et al., 2008). This model

demonstrates that there is an increased risk for SIDS at the point of 'intersection' of these three domains (Figure 1.1), although this model may facilitate our understanding of why one infant may die, it does not explain why another infant in similar circumstances, survives (Trachtenberg et al., 2012). This in part, may be explained by investigating differences in child-care practices that may occur between families with similar characteristics.

Figure 1.1: Venn diagram showing the triple risk model for SIDS (Adapted from Trachtenberg et al. 2012)



Suboptimal intrauterine conditions caused by maternal smoking and substance abuse or maternal physiological conditions such as an episode of heavy bleeding during pregnancy affect foetal neurological development and cause foetal hypoxia. Identification of these factors has been associated with an increased risk of SIDS (Anderson, 1997; Fleming and Blair, 2007; Golding, 1997; Mitchell and Milerad, 2006). However, Infants born following significant maternal anaemia (following a significant bleed during pregnancy) were more likely to die during the neonatal period or more likely to die as a non-SIDS death in the post-neonatal period (Guntheroth and Spiers, 2002). Therefore, behaviour change in the antenatal period, reducing or stopping smoking, for example, is likely to have a positive impact on foetal developmental, decreasing the risk of developmental defects that increase the vulnerability in the infant after the neonatal period.

The triple-risk model proposed by Filiano and Kinney (1994) has endured as a relevant framework due to its ability to evolve with research developments and acknowledges that these deaths are multi-factorial, therefore, by eliminating as many modifiable risk factors as possible, parents can reduce the risk of unnecessary infant deaths. This review considers the risk factors that are modifiable in each domain. From the potential impact on the foetus (intrinsic factors) of behaviours that negatively influence the intrauterine environment, such as maternal smoking, alcohol and/or drug use; to extrinsic factors, such as infant sleep position and the cot environment; and infant-care practices, such as choosing whether to breastfeed or co-sleep. The following sections discuss the current evidence-base for identified risk factors and family and infant vulnerability for SIDS.

1.3 Current Understanding of Risk Factors

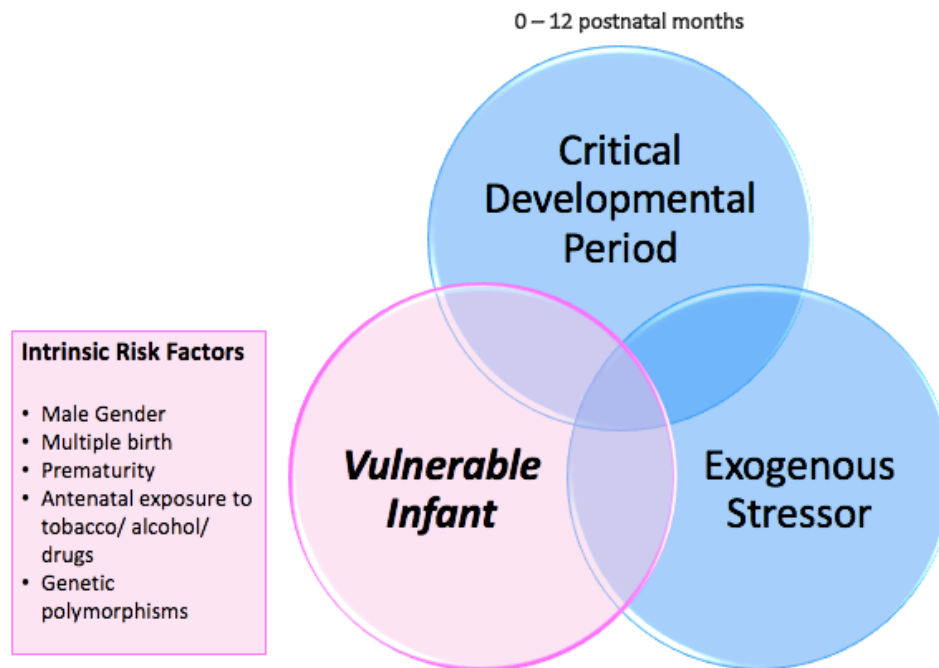
In this section, the research that underpins our current understanding of the risk factors is presented in sections related to:

- 1. *The infant:*** their health or the impact of being born early, or with low birth weight, for example, their development and whether breastfed,
- 2. *The physical sleep environment:*** where the infant sleeps, the position the infant is placed to sleep in, soft bedding or other unsuitable sleep surfaces, overwrapping and overheating of the infant; and
- 3. *Social factors and parenting practices:*** which increase risk, for example, young and single mothers, mothers who smoke, misuse drugs and/or alcohol, and co-sleeping.

The modifiable nature of these risk factors and the ability and motivation of the mother in modifying these risk factors is considered within each section and are linked to each of the elements of the triple-risk model.

1.3.1 The Infant

Figure 1.2: Venn diagram highlighting the vulnerable infant characteristics in the triple risk model (Adapted from Filiano & Kinney, 1994)



There are a number of well-documented factors in the foetus and new-born that increases their vulnerability. Mothers who smoke, take drugs and/or drink alcohol during pregnancy are subjecting their infant to suboptimal intra-uterine conditions, resulting in hypoxia from increased maternal circulating carbon monoxide and nicotine which acts to constrict placental blood vessels; and transfer of toxic substances across the placenta, both of which have a deleterious effect on foetal development. Infants of smokers are more likely to be of low birth weight, growth restricted and to be born before term, increasing their risk for SIDS (Ostfeld et al., 2017). In 2012, the rate of SIDS in infants of low birth weight (2,500g or below) was three times higher at 0.81/1,000 live births, compared to infants of normal birth weight (2,500g or above) at a rate of 0.27/1,000 live births (Office for National Statistics, 2015). In animal studies, a range of adverse outcomes have been reported in offspring that were exposed to nicotine in-utero; including metabolic disorders (Gao et al., 2005; Holloway et al., 2005), pulmonary (Maritz, 2013; Sekhon, 2001), neurological (Muneoka et al., 1997 & 2001; Ribary and Lichtensteiger, 1989; Seidler et al., 1992), and cardiac defects (Bruin et al., 2010;

Lawrence et al., 2008), and behavioural and cognitive deficits (Ernst et al., 2001; Kelmanson, Erman, and Litvina, 2002). Abdel-Rahman et al. (2005) continued to observe the neurological effects of in-utero nicotine exposure, up to two months after the birth of infant rats. Effects have also been demonstrated into adulthood with nicotine exposed offspring showing elevated blood pressure and increased risk for developing type 2 diabetes (Gao et al., 2005 & 2008). Although these studies were conducted with animals, the effects of nicotine are demonstrable and therefore very likely to have a similar impact on human development. These animal studies enable examination of the effects of nicotine specifically, as opposed to general infant exposure to smoking, and are relevant to the use of nicotine in e-cigarettes discussed later (Suter et al., 2014).

As the infant adapts to extra-uterine life, they are born with a number of life-preserving reflexes, such as gasping when blood oxygen saturation decreases. These reflexes diminish as the infant matures, but during the early months, neurological pathways stimulated during physiological change or challenge, arouse the infant to mediate harm. Studies comparing the prone and supine sleep positions in healthy infants identified that all cardiovascular, respiratory and neuro-feedback mechanisms were reduced in infants placed prone, and rates of spontaneous and provoked arousal were also decreased (Galland, Taylor and Bolton, 2002; Richardson, Walker and Horne, 2008; Wu et al., 2017). Studies have also identified developmental abnormalities within the central nervous system of infants who die as SIDS compared to non-SIDS deaths. These abnormalities impact on respiratory and cardiac response to challenge (Bright et al., 2017; Paterson et al., 2006); however, while these infants had an identified underlying abnormality, all SIDS cases were also noted to have been exposed to an exogenous stressor such as unsafe sleep position or illness reported in the previous month prior to death (Bright et al., 2017). While no causative pathway can be claimed to explain SIDS, this provides significant evidence that the prone sleep position increases the risk for infants and impairs their ability to respond effectively to a physiological and potentially life-threatening challenge. Their physical abilities are also less well developed; very young infants are unable to lift their head to escape soft bedding for example, so the gasp reflex will be compromised in this situation. Due to their

immature thermo-regulation system, infants are less able to regulate their body temperature. Head covering, soft bedding, multiple layers of bedding, overwrapping and placing the infant prone can all have an impact on the infant's ability to reduce their body temperature causing them to 'overheat' which, in turn, can compromise their ability to arouse spontaneously when asphyxia is imminent (Richardson, Walker and Horne, 2008; Sawczenko and Fleming, 1996; Williams, Taylor and Mitchell, 1996).

The infant's immune system is also immature; however, the placental transfer of maternal antibodies, breastfeeding (Hauck et al., 2011; Highet et al., 2014; Venneman et al., 2009) and engaging with the childhood immunisation programme (Brotherton et al., 2005; Kunhert et al., 2012) have demonstrated a protective effect against SIDS and will confer some protection until their immune system matures. However, infants from lower socio-economic groups are less likely to be breastfed or start the immunisation schedule on time or complete all the required immunisations (Ellis, Roland and Blair, 2014). Infants of mothers who smoke and those exposed to a smoky environment after birth are also more prone to respiratory infection (DiFranza, Aligne and Weitzman, 2004); however, a study by Woodward et al. (1990) found that breastfeeding modified the effects of passive smoking and breastfed infants contracted fewer respiratory infections compared to infants of mothers who smoked and bottle-fed. Nicotine is found in the breast milk of smokers (Ferguson, Wilson and Schaffner, 1976); however, there is little evidence of the impact on the health of the infant. The research does highlight that lactation can be diminished in mothers who smoke, and infants were observed to be more unsettled; therefore, mothers tended to breastfeed for a shorter duration, believing their breast milk was insufficient and consequently, infants were also weaned at an earlier age (Liu, Rosenberg and Sandoval, 2006). The protective effect of breastfeeding is thought to be linked to the establishment of appropriate gastro-intestinal flora facilitated by breast milk and the presence of IgA antibodies in breast milk that neutralise bacterial toxins and therefore protects against common infections in infancy, such as respiratory and gastrointestinal infections; neither of these functions is associated with formula milk (Gordon et al., 1999; Highet et al., 2014; Hoddinott, Tappin and Wright, 2008).

Research has also identified that within the SIDS profile there is a preponderance of boys. This may be due to reported differences in the inflammatory response between girls and boys; with boys being more susceptible to infection during the early months of life, increasing their vulnerability in general and therefore increasing their risk for SIDS (Fleming, Tsogt and Blair, 2006; Garcia, 2013; Moscovis, 2014). An increased risk for SIDS has also been identified with increased family size and multiple births (Fleming, Blair and Pease, 2015; Fleming et al., 2000), and for a sibling of a previous SIDS baby (Fleming et al., 2000; Glinge, 2018).

Summary

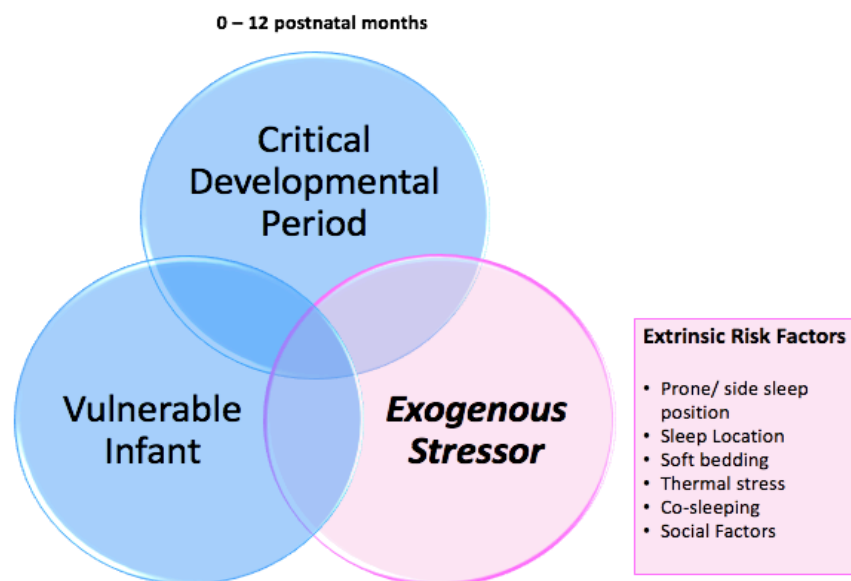
In summary, the new-born infant is vulnerable and dependent upon its mother for survival. The infant possesses rudimentary reflexes to preserve life, but these can be overwhelmed by intrinsic factors that compromise the infant themselves or the external environment into which they are placed, such as a hazardous sleep environment, contracting an infection or compounded by exposure to other potentially harmful elements such as a mother who smokes.

1.3.2 The Physical Sleep Environment

The parent creates the infant sleep environment. Mothers want their infant to be comfortable and safe, and most of all they want their infant to sleep! In creating the ideal sleep environment, parents must negotiate the plethora of safe sleep advice together with advice from family, friends, and professionals, and other influencers such as the media, retailers and celebrity parents as role models. All this occurs within a framework of parental beliefs and experience, and consideration of available resources. Mothers from lower socio-economic groups are likely to have limited resources in terms of education, financial provision and issues with housing. Some of the issues encountered may be protective for the infant. Living in a small flat for example; the infant is likely to sleep in the same room as her mother which is a protective factor for SIDS (Carpenter et al., 2004; Scragg et al., 1996). However, if the parent cannot afford a cot, then the mother may choose to bed-share with her infant, increasing the risk of SIDS, and further increasing risk if she also smokes (Fleming and Blair, 2007; Mitchell and Milerad, 2006; Zhang and Wang, 2013). There is a lot for mothers to think about when

creating the infant sleep environment and there are multiple components and external influences that have an impact on the ‘finished product’ and potential risks to the infant. Another important and often overlooked factor, which increases the risk for the infant, is the ‘unplanned’ sleep environment (Pease et al., 2017b). Mothers may strive to ensure that the ‘usual sleep space’ for their infant meets the required safety standards, however, risk is increased when the normal routine is interrupted, or even for day time sleeps, when the infant may be placed on a sofa or placed in the cot in a room away from the mother. Creating the safest sleep environment is complex and multi-factorial for mothers and requires planning for non-routine times. All of the exogenous factors are modifiable and offer an opportunity to reduce risks in the infant sleep environment.

Figure 1.3: Venn diagram highlighting the exogenous stressor factors in the triple risk model (Adapted from Filiano & Kinney, 1994)



Sleep Position

The initial identification of the prone sleep position as a significant risk factor for SIDS generated international ‘back to sleep’ campaigns that were very successful in reducing infant mortality rates and consequent SIDS rates. With the focus on the risk associated with the prone position, parents were advised to select either back or side sleeping positions for their infants. A number of large case-control

studies conducted after the initial 'back to sleep' campaign successes, identified that the side sleep position was more hazardous for infants than being on their backs, although not as hazardous as the prone position (Fleming et al., 1996; Li et al., 2003; Oyen et al., 1997; Scragg and Mitchell, 1998). Oyen et al. (1997) posit that the increased risk associated with the side sleeping position concerned its instability; they found that more infants who died as SIDS were found prone having been placed on their side for sleep, compared to controls also placed on their side for sleep, supporting the risk associated with instability. Fleming et al. (1996) and Blair et al. (2006c), however, found that a significant number of infants who died as SIDS were placed and found on their side, suggesting that the side position carries its own specific risk.

A number of studies have identified that mothers within indigenous populations, with low educational achievement and low income, are more likely to select a non-supine sleep position for their infant from a very young age. Mothers give a variety of justifications for their decisions such as comfort for the infant, fear of the infant choking if placed on their back, infant preference for a non-supine position and better sleep quality in a non-supine position (Colson et al., 2006; Moon et al., 2010; Smylie et al., 2014; Von Kohorn et al., 2010). A study of young Hispanic mothers by Lesko et al. (1998) found that some mothers were likely to change their infant's sleep position from supine to side or prone between one and three months. The reasons they gave for changing the sleep position ranged from advice from friends and family, particularly for first-time mothers, to infant preference. In order to reduce the risk of SIDS, the supine sleep position has been identified as the safest option. The infant should be placed on their back for all periods of sleep until they reach a developmental stage where they can roll over independently and select their sleep position. Mothers may also require reassurance from health professionals to encourage placing the infant supine, allaying fears of choking or advising the use of swaddling which may promote the infant to settle and sleep in the supine position. The location selected for infant sleep can also have an impact on the risk of SIDS.

Sleep Location

Several studies have identified that the safest place for an infant to sleep for the first six months of life is in the same room as their parent and in their own cot (Blair et al., 1999; Carpenter et al., 2004; Scragg et al., 1996; Tappin et al., 2005); however, there is an anthropological perspective to be considered when giving 'one-size-fits-all' safe sleep advice. The evidence underpinning room sharing is compelling and makes sense. There is no biological foundation for an adult with a vested interest in an infant's welfare to leave that infant unsupervised for any length of time. Nature provides a mother with all she needs to support her infant, and there is a requirement that the infant remains near to the mother until they develop some independence.

During the 1950s and '60s in Western culture, various child-care practices evolved that were held up as the 'gold standard' for parents to achieve. Practices such as bottle feeding, solitary infant sleeping, self-soothing and sleeping through the night, were goals to be reached as early as possible and purported to be in the best interests of the infant by experts; however, these practices lacked scientific foundation. Aligned with these practices was the advice to sleep infants prone. As researchers identified the risks associated with these practices, the advice to parents has changed, however, not all parents are able to take on board these messages, and risky child-care practices endure, particularly among the more vulnerable groups in society.

A study of white and South Asian mothers in Bradford, identified that 24% of white mothers put their babies to sleep in a separate room compared to 2% of South Asian mothers (Ball et al., 2012). The choice of where the infant sleeps is influenced by the complex interplay between a number of factors, ranging from accepted cultural practice to convenience for feeding, or choice of feeding method, to fostering independence in the infant and encouraging the 'gold standard' of the infant 'sleeping through the night' and maintaining the 'privacy' of the parental relationship (McKenna and McDade, 2005).

Current UK safe sleep guidance (UNICEF, 2010; www.lullabytrust.org.uk, 2018) recommends infants should sleep in the same room as their parents in their cot; however, these recommendations are focused mainly on night-time sleep. SIDS

can occur during any infant sleep period, and the characteristics of the sleep environment may differ for daytime sleeps, for example, infants placed for sleep during the day are more likely to be left alone unsupervised for the duration of that sleep, or with only intermittent checking. Blair et al. (2006b) found that 75% of daytime deaths occurred in an unsupervised room. Studies also found that infants were more often placed for sleep in a non-supine position for daytime sleep when for night sleep they would be placed supine (Blair et al., 2006b; Williams, Mitchell and Taylor, 2002). Williams et al. (2002) also identified that night-time deaths were more strongly related to factors of social deprivation than daytime deaths. These studies recognise the protective nature of having an available and invested carer present for every sleep period and, following the same guidance for the sleep environment for all sleep periods, including planning where possible for non-routine events, such as periods of sleep away from home. Where poverty and housing issues are significant factors, overcrowding and lack of bedroom space will have an impact on the infant sleep environment, and this needs to be considered by health professionals when advising mothers about safe sleep. Co-sleeping is considered later.

Soft Bedding and Head Covering

Table 1.4: Soft Bedding and Head Covering Literature Summary

Issues	Literature
Overheating Rebreathed expired air Suffocation Strangulation	Fleming, Gilbert and Azaz (1990); Kemp et al. (1998) Mitchell, Williams and Taylor (1999); Mitchell et al. (1998)
Bedding Tog value	Blair et al. (2009); Fleming, Gilbert and Azaz (1990)
Head covering	Beal (2000); Beal, Baghurst & Antoniou (2000); Blair et al. (1999, 2008 & 2009); Carpenter et al. (2004); Fleming et al. (1996); Hauck et al. (2003); Mitchell et al. (2008)
Soft/ inappropriate bedding	Batra et al. (2016); Coventry, Solihull and Warwickshire SCB (2014); Garstang et al. (2016); Matthews et al. (2016a); Shapiro-Mendoza et al. (2015)

Loose, soft and inappropriate bedding in the sleep environment has been identified as posing a significant risk to the infant; potentially increasing heat retention, particularly if the infant is also over-wrapped and covered with bedding, presenting a suffocation or strangulation risk, or can contribute to the infant rebreathing expired air if the infant's head becomes covered. Head covering was identified as a risk for SIDS from case-control studies that found SIDS infants were more likely to be found with their heads covered than controls. This phenomenon was also identified as being more likely to occur when infants were sleeping alone in a cot as opposed to sharing a bed with a parent (Beal, 2000; Beal, Baghurst and Antoniou, 2000; Blair et al., 1999; Mitchell et al., 2008). Subsequent advice to parents to put their infants to sleep in the 'feet to foot' position in the cot, tuck bedding in securely and ensure the infant did not get too hot, had an impact in reducing some of the risks posed by soft, loose and high tog rated infant bedding. Manufacturers have responded, in part, to the requirement to provide safer bedding by reducing the thermal value of infant bedding. An average tog rating of 8 was recorded in a UK case-control study between 1987-89 (Fleming, Gilbert and Azaz, 1990) reducing to a 2.4 tog rating in a subsequent study between 2003-6 (Blair et al., 2009). However, potentially unsafe bedding such as cot bumpers, are still displayed and sold by retailers, and used by parents (Garstang et al., 2016). Images of soft fluffy bedding are also plentiful in the media and advertising aimed at parents, reinforcing unsafe sleep environments. From my professional experience and a recent audit of reports from CDOPs, infants dying suddenly and unexpectedly are still being found in circumstances where overheating is likely. Situations of multiple layers of bedding, dangerous soft and loose bedding, and adult pillows are reported to be present in the infant sleep environment. Therefore, risk reduction messages are still not getting through to vulnerable parents (Coventry, Solihull and Warwickshire SCB, 2014; Garstang et al., 2016). A cot with a well-fitting, firm mattress and minimal well tucked in bedding, or an infant sleeping bag is all that an infant requires; all other paraphernalia should be removed from the cot when the infant is placed for sleep.

Swaddling

Table 1.5: Swaddling Literature Summary

Issues	Literature
Quieter, deeper sleep, less arousal	Meyer and Erler (2011); Richardson (2009); Richardson, Walker and Horne (2010); Van Sleuwen et al. (2006 & 2007)
Supports sleep in the supine position/ protective of SIDS	Franco et al. (2004); Oden et al. (2012); Van Sleuwen et al. (2007)
Routine swaddling protective	Oden et al. (2012)
Non-routine swaddling increased SIDS risk	Kelmanson (2013); Richardson (2009); Richardson, Walker and Horne (2010)
Swaddling increased risk of SIDS related to sleep position	Blair et al. (2009); Pease et al. (2016); Van Sleuwen et al. (2007)
Quality of swaddling application	Franco et al. (2004); Van Sleuwen et al. (2007)
Hip dysplasia	Clarke (2013); Van Sleuwen et al. (2007).
Overheating	Blair et al. (2009); McDonnell et al. (2014); Ponsonby et al. (1993); Van Sleuwen et al. (2007)
Chest Infections	Van Sleuwen et al. (2007); Yurdakok, Yavuz and Taylor (1990)
Risk increases with swaddling and developmental age	Pease et al. (2016); McDonnell et al. (2014)

Swaddling is becoming more popular in the UK and the benefits of this practice, such as quieter, deeper sleep, less arousal and a reduction in unsettled crying of the infant, have been observed. Routine use of swaddling and placing the infant supine has been identified as protective for SIDS, preventing younger infants from potentially rolling prone, however, infants swaddled and placed in the side or prone position have significantly increased the risk for SIDS. Infants naïve to swaddling or who are not swaddled routinely were also identified to be at increased risk for SIDS due to the induced deeper sleep state impacting on their arousal to environmental stressors. Other risks of swaddling include increased risk of hip dysplasia, the potential for the infant to overheat, and an increased risk of

respiratory infections due to restricted lung expansion. Risks are also associated with increasing developmental age and ability.

In relation to SIDS, therefore, swaddling is a contentious issue. The choice of infant sleep position in combination with the quality of swaddling and the developmental stage of the infant and whether swaddling is used routinely can all significantly increase or decrease the risk for SIDS. To reduce the risks and maximise the benefits of swaddling, mothers need specific advice on how to swaddle safely, be observant of the developmental progress of their infant and to stop swaddling at the early signs of the infant's ability to roll. Research continues to investigate this practice to identify specific risks. The evidence is currently inconclusive due to limitations of standardised data collection about this practice across recent cohort studies, however, when used appropriately and consistently with the supine sleep position for young infants, the benefits of improved sleep quality may help mothers to choose to swaddle rather than place their infant in a non-supine position to encourage sleep.

Pacifier Use

Table 1.6: Pacifier Use Literature Summary

Issues	Literature
Protective effect identified for SIDS	Fleming et al. (1999); Hauck, Omojokun and Siadaty (2005); Li et al. (2006); Moon et al. (2012); Nelson (2012)
Mechanism of protection	Cozzi, Albani and Cardi (1979); Franco et al. (2000)
Routine use	Fleming et al. (1999); Mitchell, Blair and L'Hoir (2006)
Use associated with socio-economic group/ smokers	Fleming et al. (1999)
Impact on breastfeeding: <ul style="list-style-type: none"> • Prevalence and duration decreased • Duration decreased by 50% • No impact once established 	⇒ Fleming et al. (1999) and Mitchell, Blair and L'Hoir (2006) ⇒ Karabulut et al. (2009) ⇒ Jaafar et al. (2016)
Influences on use	Joyner, Oden and Moon, (2016)
Other concerns related to pacifier	Nelson (2012)
No protective effect found	Blair et al. (2009)

Parents may choose to use a pacifier to settle their infant; however, the use of a pacifier at sleep time as conferring a protective effect for SIDS is contentious. The mechanism of protection is not clearly understood, but there is evidence to support theories including increased arousal responsiveness in infants who are regular pacifier users and a decreased risk of oropharyngeal obstruction. A number of case-control studies and meta-analyses have identified a protective effect with pacifier use. Both Li et al. (2006) and Moon et al. (2012) found that this effect was independent of other environmental risk factors such as non-supine sleep position, soft bedding, and maternal smoking; and as such, pacifier use may reduce the risk of SIDS for infants exposed to adverse sleep environments. Fleming et al. (1999) also noted that pacifier use was associated with lower socioeconomic status and mothers who smoked. The protective effect appears to be linked to

routine use for all sleep periods and therefore becomes a risk when the pacifier is not used routinely (Fleming et al., 1999). Following their meta-analysis, Hauck, Omojokun and Siadaty (2005) recommended that all infants be offered pacifiers for every sleep up to one year of age and after the establishment of breastfeeding. In 2012, Nelson conducted a comprehensive review of the risks and benefits of pacifier use. She identified among the benefits, the protective effect for SIDS. The potential risks included the negative impact on breastfeeding, concerns related to oral health and dental development, otitis media, delayed speech and the risk of injury and infection related to pacifier use. Fleming et al. (1999) and Mitchell, Blair and L'Hoir (2006) identified that pacifier use was associated with both a lower prevalence and shorter duration of breastfeeding. More recent studies are contradictory, Karabulut et al. (2009) found that pacifier use decreased breastfeeding duration by half, but Jaafar et al. (2016) found no significant effect of pacifier use in healthy breastfeeding infants at three and four months. Nelson (2012) also identified that recommendations on pacifier use were inconsistent as was information and advice from professionals to parents. Blair et al. (2009) found that pacifier use had declined compared to data from a study a decade earlier and concluded this might be due to an increase in breastfeeding or breastfeeding attempts.

The evidence supports a protective effect when there is regular use of a pacifier when the infant is placed for sleep, and particularly if the infant is exposed to an already adverse sleep environment, however, irregular pacifier use may increase risk. The frequency, intensity, and duration of pacifier use relate directly to the risk-benefit ratio; therefore, parents need information to make an informed choice (Nelson, 2012). As current recommendations are inconsistent, pacifier use comes down to parental preference, but professionals have a responsibility to provide evidence-based advice and guidance to parents.

Infant Care Equipment

Table 1.7: Infant Care Equipment Literature Summary

Issues	Literature
Low-income families and purchasing baby equipment	Banister, Hogg and Dixon (2012); Nayak and Kehily (2014); Ponsford (2011)
Retail displays and media photo compliance with safe sleep messages	Epstein and McLoughlin (2002); Epstein and Jolly (2011); Epstein, Jolly and Mullen (2011); Goodstein et al. (2018); Kamra and Pitt (2018)
Cumulative use of cot mattresses/ bacteria in cot mattresses	Fleming, Blair and Mitchell (2002); Jenkins and Sherburn (2005); Sherburn and Jenkins (2004 & 2005); Tappin et al. (2002)
Using sitting devices for sleep	Batra, Midgett and Moon (2016); Cote et al. (2008); Freyne et al. (2014); Kassa, Moon and Colvin (2016)
Inappropriate sleep equipment/ incorrectly assembled	Jackson and Moon (2008); Thompson and Moon (2016)

A review of the Baby Show at Olympia, attended by around 25,000 visitors is a testament to an explosion in the infant-care equipment market, with visitors spending £39 million on baby equipment in 2016 (Snowdon, 2016). Parenting magazines, television adverts, internet sites, celebrity parents and department stores all fuel the machine that is the procurement of necessary baby equipment. Universally, parents expecting their first baby want the best that they can afford, which is also true for those on low-income.

As safe sleep advice evolves, the manufacturers follow suit, introducing various gadgets to place into the cot to keep the infant in a 'safe sleep position' for example, sleep rolls, pillows, nests, and wedges. Some retailers cot displays continue to portray an unsafe sleep environment using cot bumpers, duvets, pillows, and soft toys. The Lullaby Trust carried out two surveys nine years apart to examine retailer cot displays and their compliance with the current safe sleep recommendations. Although the later survey showed improvements in some categories, overall there remained a lack of promotion of the safe sleep recommendations in their displays and demonstrated a general absence of safe

sleeping education material (Epstein and McLoughlin 2002; Epstein and Jolly, 2011).

Manufacturers of baby equipment in the UK are required to adhere to strict safety standards. However, parents may choose to buy products from other countries via the Internet where safety standards may be different or absent, or parents may buy second-hand equipment, unaware of the point of origin of the product, and instructions for construction and safe use may be incomplete or absent. With subsequent children, equipment may be recycled from the previous baby or may be purchased or donated second-hand. Cot mattresses, in particular, were identified as potentially harbouring bacteria from previous use that could cause respiratory infection, especially when equipment was from a different home, and risk increased with cumulative use, and particularly for prone sleepers (Sherburn and Jenkins, 2004).

Equipment which is not intended for infant sleep, car seats and baby bouncers, for example, have been associated with an increased risk for SIDS, particularly during the first month of life and can increase risk of SIDS seven-fold compared to infants lying flat; similarly, incorrectly assembled or make-shift cots have been associated with both SIDS and non-SIDS deaths (Jackson and Moon, 2008; Thompson and Moon, 2016). A lack of appropriate equipment and planning can place infants at risk when sleeping away from home, perhaps, resulting in bed-sharing or sofa-sleeping, or the infant being placed for sleep in other unsuitable and unsafe locations. Adult beds and bedding do not conform to safety standards for infant sleep; therefore, risks are increased in the adult bed environment for the sleeping infant (explored further in section 1.3.3).

Pregnancy and early infancy are a time when family and friends often buy baby products as gifts, and mothers may feel obliged to use these or similarly, donations of second-hand equipment may be all that is available to low-income parents, and this equipment may inadvertently pose a risk to the infant.

In summary, parents may be pressured to have the latest baby gadgets and equipment, procurement is down to parent choice and budget, however much of the equipment marketed to enhance infant sleep is unnecessary, and in some circumstances can increase the risk of SIDS. Retailers are influential in creating the

infant sleep environment; there is an opportunity to reduce risks in the infant sleep environment by creating displays that are concurrent with safe sleep recommendations and by providing parents with safe sleep information and guidance on the correct use of products. However, this may present a conflict of interest where the retailer's objective is to increase revenue.

The Physical Sleep Environment – Summary

The physical infant sleep environment has been explored in this section. A number of potential risks and modifiers have been discussed in relation to infant sleep position, sleep location, the risks inherent with soft and loose bedding, the use of pacifiers and the practice of swaddling; and the potential hazards associated with infant-care equipment. The safe sleep guidance is clear. The recommended physical sleep environment is that an infant is placed on their back for all sleep periods into a cot in the parent's room for the first six months. The cot should have a firm, well-fitting, waterproof mattress. The infant's feet are placed to the bottom of the cot, bedding is kept to a minimum and is firmly tucked in, and the cot should be clear of paraphernalia. If this guidance is followed, the risk for SIDS is reduced.

1.3.3 Social Factors and Parenting Practices

Significant social inequalities have been revealed in the profile of infant deaths, with the most deprived and vulnerable populations at highest risk for experiencing an infant death (DH, 2010b; Fleming, Blair and Pease, 2015; Office for National Statistics, 2015; Wolfe et al., 2014). Researchers investigating SIDS have identified that these populations are more likely to engage in behaviours that increase the risk to their infants such as smoking, alcohol and drug use. Young mothers aged between 16 and 21 years are disproportionally represented across infant mortality statistics; they also demonstrate low educational achievement and are less likely to breastfeed (Ball et al., 2012; Blair et al., 2006a; Gilbert et al., 1995; Hauck and Tanabe, 2008; McMillan et al., 2009; Shrivastava, Davis and Davies, 1997; Spencer and Logan, 2004; Venneman et al., 2009). The infant may also be exposed to carers with different approaches to, and opinions on, infant care; some carers may not be aware of current risk reduction guidance or have their own strong opinions and beliefs about caring for infants who may influence mothers' infant-care practices,

particularly first-time and young mothers (Smith-Battle, 2006). This section will discuss the social factors and infant-care practices that are known to increase or minimise the risk of SIDS.

Co-sleeping and Bed Sharing

Table 1.8: Co-sleeping and Bed Sharing Literature Summary

Issues	Literature
Co-sleeping increases the risk of SIDS Characteristics that increase the risk for SIDS	Blair et al. (1999 & 2009); Carpenter et al. (2004); McGarvey et al. (2006); Mitchell (2007); Ponsonby et al. (1995); Ruys et al. (2007); Scragg et al. (1998); Tappin et al. (2005); Vennemann et al. (2012)
Hazardous co-sleeping/ parental activity	Blair et al. (2009); Hauck et al. (2008); Kendall-Tackett et al. (2010); Rechtman et al. (2014); Volpe, Ball and McKenna (2013)
Co-sleeping remained a risk in absence of identified risk factors	Carpenter et al. (2013); Scragg et al. (1998)
Co-sleeping in the absence of identified risk factors	Blair et al. (2009 & 2014); Fleming et al. (1996)
Co-sleeping – family characteristics	Ball (2002); Blair, Heron and Fleming (2010); Fleming et al. (2000); Ward (2015)
Co-sleeping and breastfeeding	Ball (2007); Ball et al. (2016); Blair and Ball (2004); Moon et al. (2017a)
Benefits of co-sleeping	McKenna and McDade (2005)

Co-sleeping is defined as the infant sleeping on the same surface (adult bed or sofa) with at least one adult. Bed sharing is when the infant and parent(s) share the same bed. These terms are often used interchangeably and can confuse parents and professionals. Several large case-control studies identified co-sleeping and bed sharing as increasing the risk for SIDS. These studies identified particular characteristics that increased the risk for SIDS, such as mothers who smoked, consumed drugs or alcohol, use of high tog value bedding such as duvets, and co-sleeping. Scragg and Mitchell (1998) and Carpenter et al. (2013) reported that co-sleeping remained a risk for infants in the absence of identified risk factors, and where the infant was breastfed. Scragg and Mitchell (1998) reported an increased

risk for SIDS as being around 40 – 50% in the absence of any other risk factors other than bed sharing.

Similarly, in a review of five large case-control studies to identify the risk of SIDS associated with co-sleeping, Carpenter et al. (2013) concluded that the risk for SIDS and co-sleeping was significantly increased when maternal smoking, alcohol, and drug use were reported, but a five-fold increased risk for SIDS remained for young infants in the absence of these risk factors. The authors claim that up to 90% of SIDS could be prevented if co-sleeping was avoided (Carpenter et al., 2013: P10). However, there were some flaws in this review, making conclusions and generalisation across populations and cultures problematic. Although the review included five large case-control studies, studies were geographically and culturally different and had different social contexts. Data on two of the key elements under investigation, drug and alcohol use, were only collected in one, and two of the studies respectively, instead missing data were imputed into the statistical model; the conclusions of this review were drawn based on these data despite acknowledging that 60% of relevant data were missing.

A similar review of data from two UK studies by Fleming et al. (1996) and Blair et al. (2009), reported that 36% of SIDS infants were co-sleeping at the time of death, compared to 15% of controls for the reference sleep (Blair et al., 2014). Blair (2014) identified that co-sleeping on a sofa with an adult, co-sleeping following consumption of two or more units of alcohol or consumption of drugs, and co-sleeping with an adult smoker, particularly when the infant was younger than three months old, increased the risk for SIDS. Blair (2014) found that bed sharing in the absence of these risks did not present a significant risk for infants younger than three months of age and demonstrated a protective effect for infants older than three months. The strength of this review compared to Carpenter's (2013), was that data were available on the topic of interest, data collection and geographical context for the two studies was identical, and missing data were minimal (5%).

Following the identification of risk for SIDS associated with co-sleeping, some countries advise parents to avoid co-sleeping and bed sharing; while in the UK, the advice is more flexible, warning not to co-sleep if the mother smokes, where

alcohol and/or drugs have been consumed or if the infant was born preterm (NICE, 2015; UNICEF, 2010). Despite these warnings, many parents continue to sleep with their infants (Hauck et al., 2008; Kendall-Tackett, Cong and Hale, 2010) and some, in hazardous circumstances (Blair et al., 2009). Some parents, concerned about the risk of bed sharing may select the sofa to feed, settle, or even sleep with their infant; co-sleeping on a sofa or armchair was identified as a significant risk factor (Blair et al., 2009).

An observational study by Volpe, Ball and McKenna (2013) video recorded four first-time mothers and their four-month-old infants during a night stay at a sleep lab. They observed a number of situations and strategies used by the mothers to minimise their sleep disturbance during the night; many of these strategies increased the risk for the infant. The study concluded that mothers assess the immediate 'costs and benefits' of the given situation and make decisions based on relative risk. The dynamic nature of this decision-making is not captured by safe sleep and risk reduction advice. Similar findings were reported by Batra et al. (2016) and Paul et al. (2017) with both these studies reporting changes of sleep location for infants during the night and usually to a location with increased risk. Common sense tells us that not all families that co-sleep, share the same characteristics and infant-care practices vary considerably (Ball, 2002; Fleming et al., 2000). The co-sleeping debate has polarised opinion; from co-sleeping as a natural and nurturing infant-care practice which supports attachment and breastfeeding, to parents risking overheating, overlaying or suffocating their baby. Co-sleeping is an ancient infant-care practice and is common in the UK across all socioeconomic groups, with around 50% of parents reporting that they have slept with their infant within the first few months of life (Blair and Ball, 2004). Blair and Ball (2004) found that in the UK, bed sharing was more likely to occur in the least deprived families and was strongly associated with breastfeeding, a finding replicated in a longitudinal cohort study in Avon, UK (Blair, Heron and Fleming, 2010).

The reasons parents give for choosing to sleep with their infants are multiple and complex; from supporting breastfeeding to getting more and better-quality sleep, comforting and bonding, monitoring and protection, and from practical issues

such as not having a cot to cultural and traditional infant-care practices and maternal instinct (Ball, 2002; Caraballo et al., 2016; Ward, 2015). Co-sleeping also has documented long-term benefits for infant development (McKenna and McDade, 2005). Some parents plan to co-sleep, while others do so inadvertently and some in hazardous circumstances. Ward (2015) noted that some parents who were aware of current recommendations were sceptical or disbelieving of the advice against bed sharing and minimised the risks of this practice; parents also expressed guilt and anxiety if they were co-sleeping and some parents were ‘covert co-sleepers’ choosing not to share information with family or professionals about their co-sleeping practice. Safe sleep advice needs to take account of these complex components and individual parental attitudes and preferences to be effective and encourage parents to make an informed choice. A ‘one-size-fits-all’ approach to risk reduction education only serves to alienate certain groups of parents and may seriously damage the parent-professional relationship when dialogue is replaced by dictat.

Infant Feeding Choice

Table 1.9: Infant Feeding Choice Literature Summary

Issues	Literature
Infant feeding influenced by social and cultural norms	Gilbert et al. (1995); Kadakia et al. (2015); Nesbitt et al. (2012)
Breastfeeding is less commonly initiated or sustained within the lower socio-economic groups	Blair, Heron and Fleming (2010); Gilbert et al. (1995); Liu, Rosenberg and Sandoval (2006); McMillan et al. (2009); Nichter et al. (2008); Venneman et al. (2009)
Association between bottle-feeding and SIDS	Alm et al. (2002); McVea, Turner and Pepler (2000)
Breastfeeding as protective/ BF duration	Hauck et al. (2011); Thompson et al. (2017); Venneman et al. (2009)

Breastfeeding has been identified as a protective factor for SIDS; however, breastfeeding is less commonly initiated or sustained within the lower socio-economic groups, and women who smoke and are of lower educational achievement are less likely to breastfeed. Venneman et al. (2009) and Hauck et al.

(2011) identified that breastfeeding demonstrated a protective effect, even after controlling for a lower socio-economic group and maternal education, which supports that breastfeeding may confer some protection in vulnerable mother-infant pairs, and should be promoted (Hauck et al., 2011; Venneman et al., 2009). A 'dose-response' was also noted, mothers who breastfed exclusively and fed for longer, particularly during the first six months, demonstrated a reduced risk for SIDS (Hauck et al., 2011; Venneman et al., 2009). However, a more recent meta-analysis of SIDS studies that collected breastfeeding data, identified that breastfeeding for at least two months conferred a protective effect, and importantly, this was not limited to exclusive breastfeeding (Thompson et al., 2017).

Infant feeding choice is influenced by social and cultural norms within social groups, with the woman's own mother and partner reported as having the most significant influence on her selection of feeding method and duration of breastfeeding. However, Nesbitt et al. (2012), in a recent qualitative study of 16 Canadian adolescent mothers, found that their decision to breastfeed was made antenatally and, although they considered the opinions of their mother and partner, they made their own decision. Their decision to initiate and continue with breastfeeding was influenced by multiple factors, including social and intimate relationships, the physical demands of breastfeeding, the availability of support and their knowledge of the benefits of breastfeeding. Motivation was identified as a critical factor, those mothers who were committed to breastfeeding were more likely to succeed, and continue for longer, than those who stated they would 'try', who were less likely to be successful or persist. Nichter et al. (2008) found that women in lower socio-economic groups were 'put off' breastfeeding when they were required to spend a lot of time in public buildings or on public transport, these environments were not considered conducive to breastfeeding. Other reasons given for not exclusively breastfeeding or moving to bottle feeding, were experiencing pain, being sceptical about the claimed benefits of breastfeeding, that others could help with feeding and caring for the infant, giving the mother a break or much-needed sleep; and to resume a social life or return to work.

The choice of infant feeding method may be indicative of a mother's approach to other infant care practices and a marker for related behaviours and lifestyle choices, such as smoking and alcohol use. However, with an educational and supportive approach, more young mothers might be encouraged to initiate and continue to breastfeed their infants.

Smoking

Smoking rates in the general population in the UK have decreased steadily since systematic data collection began in 1974, falling from 45% in 1974 to 19% in 2014. Slightly more men (20%) than women (17%) smoke; smoking rates are highest in the 16 – 34-year age group and in the lower socioeconomic groups (ASH, 2016). A number of government strategies have supported the reduction in smoking rates, such as legislation on smoke-free public places, increased taxation on tobacco, and the recent introduction of standardised plain packaging with larger health warnings for tobacco products; some of these strategies have had a measurable clinical impact on reducing infant mortality (Been et al., 2015). Smoking rates, as stated above, have not decreased equally in the population, with rates in the lower socioeconomic groups remaining significantly higher, at 30% for manual workers compared to 13% of managerial and professional groups. Smokers in the lower socioeconomic groups were identified to start smoking at an earlier age and be heavier smokers (ASH, 2016). Lumley et al. (2009) also identified that those in lower socio-economic groups, of lower educational achievement, living in poverty and those who are less psychologically resilient were more likely to continue to smoke, which is mirrored in the population of pregnant women. In addition, smoking during pregnancy included younger women, women who are marginalised and unsupported and more likely to be receiving state financial support. Fleming & Blair (2007) also found that as the prevalence of smoking during pregnancy decreased in the general population between 1984 – 2003 from 30% to 20%, the proportion of SIDS mothers who smoked during pregnancy increased from 50% to 80%, and the mothers who smoked were predominantly from the lower socioeconomic groups. The number of mothers who report smoking at delivery has also decreased steadily in the UK from 15.1% in 2006/7 to

10.2% in 2014/15; The current rate in the West Midlands Region is 10.4% and is the fifth highest in the UK (NHS Digital, 2015).

Maternal smoking is associated with an increased risk of obstetric complications, deleterious effects on foetal development (the effects of nicotine are outlined in section 1.3.1), preterm birth, having an infant of low birth weight, and there is a significant association with SIDS (Anderson, 1997; Blair et al., 1996; Carpenter et al., 2004; Fleming and Blair, 2007; Golding, 1997; Mitchell and Milerad, 2006; Mitchell et al., 1997). While pregnancy is a potential motivator to stop smoking and provides an opportunity for intervention (McBride, Emmons and Lipkus, 2003), a recent systematic review of smoking cessation interventions identified that only around 6% of pregnant women stop smoking, and many of these are in the latter stages of pregnancy (Lumley et al., 2009). Following the birth, up to 50% of mothers return to smoking within the first postnatal month, and by twelve months this is reported to be up to 80% (Mullen, 2004; Nichter et al., 2008).

Maternal smoking was identified as the next most important modifiable risk factor after the prone sleep position and remains so today (Chong, Yip and Karlberg, 2004; Liebrechts et al., 2011; MacDorman et al., 1997; Mitchell and Milerad, 2006; Zhang and Wang, 2013). The association between maternal smoking and the risk of SIDS is highest when the mother smokes during pregnancy; however, there is also strong evidence that smoking in the infant's environment after birth significantly increases risk. Research has demonstrated a dose-dependent response, where risk increases proportionately to the number of cigarettes smoked and the number of people smoking around the infant (Fleming and Blair, 2007; Klonoff-Cohen et al., 1995; Mitchell et al., 1993). Passive smoking has been identified as an independent risk factor when the mother has not smoked during pregnancy but resumes smoking following the birth (Liebrechts et al., 2011; Ponsonby et al., 1995). While much of the literature and indeed, smoking cessation activity is focused on antenatal maternal smoking habits, it is equally important to review smoking in the postnatal period to reduce harm to the general health of the mother and infant and reduce the risk of SIDS. Studies that have examined the postnatal smoking behaviour of women report high rates of smoking relapse (Mullen, 2004; Nichter et al., 2008). A qualitative, longitudinal

study of 44 low-income women in a south-western state in the USA investigated the 'work' of pregnant and postnatal women in their attempts to quit or reduce their smoking. They identified three distinct groups within their participants; those who were able to quit during pregnancy: the 'quitters', those who were able to reduce their level of smoking by 50%; the 'harm-reducers' and the 'shifters', those whose attempts at quitting were erratic and generally unsuccessful. Those who quit were identified as having the lowest smoking levels at less than 15 cigarettes/day in comparison to the shifters, who had the highest level of smoking at 23+ cigarettes/day. Despite the attempts and successes to reduce and quit smoking during pregnancy, 50% of participants had resumed smoking by four weeks post-partum, increasing to around 80% at one year (Nichter et al., 2008). This study also noted that smoking habits influenced breastfeeding initiation and maintenance, finding that breastfeeding was much reduced, few reaching one month, and only three participants reported exclusively breastfeeding at three months.

Smoking cessation during pregnancy is often motivated by external influences: nausea, concern for foetal health and social pressure for example, which are strong external motivators. Women who have a strong desire (high self-efficacy) (Bandura, 1997) to stop smoking in the long term, for the benefit of their infant and their own health, are likely to be more successful than those women who 'suspend' smoking during pregnancy. Women who suspend smoking due to external pressure and expectation, but have low desire or self-efficacy, and either intend to smoke after pregnancy or unintentionally relapse due to low motivation to remain abstinent, are much less likely to stop smoking (Bandura, 1997; Mullen, 2004). Other factors known to influence post-partum smoking relapse include a partner who smokes, increasing the risk of relapse three-fold; other smokers in the household; and those who like smoking, and believe they can protect their infant from the harms of smoking. For younger women, those who relate smoking to their former identity as a young adult rather than a mother, and those who strongly associate smoking with social interactions are more likely to resume smoking after birth (McBride, Pirie and Curry, 1992; Mullen, 2004; Solomon et al., 2007; Von Kohorn et al., 2012).

Another topical and contentious debate relates to the increasing trend of e-cigarette use or 'vaping', used either as an aid to quit smoking or to replace conventional cigarettes that are perceived as more harmful to the foetus and less socially acceptable (Baeza-Loya et al., 2014; England et al., 2015; Mark et al., 2015). E-cigarette devices work as an aerosol, vapourising the liquid contents to deliver a 'puff' of vapour to the recipient mimicking smoking. The vaping liquid can contain nicotine and are available in a variety of nicotine strengths. These devices and liquids have only been required to be regulated in the UK since May 2016. Studies have identified some physiological benefits of using e-cigarettes over conventional tobacco products, and e-cigarettes contain fewer of the harmful compounds found in conventional cigarettes; therefore, the claims of e-cigarettes as being less harmful than cigarettes have some foundation (Breland et al., 2016). However, a systematic review in 2014, found that there were issues of conflict of interest in 34% of available research, either conducted by e-cigarette manufacturers or affiliated researchers (Pisinger & Dossing, 2014). It is important to point out, that any perceived benefits to the pregnant user do not extend to the developing foetus that is still exposed to the effects of inhaled nicotine. One study found that nicotine dosage could be significantly increased for experienced 'vapers' compared to cigarette smokers (Breland et al., 2016; Suter et al., 2014). Little longitudinal research evidence is available yet regarding the safety or consequences of long-term use of these devices, particularly for pregnant women and the infant, yet pregnant women may opt for e-cigarettes as a safer and more socially acceptable alternative, and indeed, may be advised to do so by their health care provider (England et al., 2014). Surveys on public perceptions of safety, addictive properties and health benefits of e-cigarettes compared to conventional tobacco products reveal that public opinion is changing, with many now rating the risks of e-cigarettes as similar to conventional tobacco (Majeed et al., 2016; Mark et al., 2015). However, a survey of young, pregnant smokers in Kentucky, USA, found that 50% of participants who continued to smoke during pregnancy were also using e-cigarettes (dual users), although frequency of use was reduced for both; two thirds perceived e-cigarettes to be less harmful than cigarettes and 20% believed e-cigarettes offered no hazard to health (Ashford et al., 2016). This study

also found that pregnant women using e-cigarettes were likely to have lower educational attainment. Mark (2015) conducted a survey with pregnant women on their use and attitudes toward e-cigarettes in the UK. Three-quarters of respondents viewed e-cigarettes as a smoking cessation device, 43% of women believed that e-cigarettes were less harmful to themselves and their foetus than conventional cigarettes and 66% of those who had used these devices stated that they were unaware that e-cigarettes contained nicotine.

Studies examining e-cigarette use conclude that more research needs to be conducted, but are unanimous in their message regarding pregnancy, that no level of nicotine is safe, as there is a good evidence base documenting the harmful effects of nicotine on foetal development (Suter et al., 2014). Due to the lack of longitudinal evidence about e-cigarette use and their particular impact on health, there is a resultant lack of information to the public and specifically pregnant women. The Lullaby Trust provides an information leaflet on its website, compiled by the 'smoking in pregnancy challenge group', for professionals on the use of e-cigarettes (The Lullaby Trust, 2017). Interestingly, the leaflet almost dismisses any concerns associated with nicotine, and also advocates the use of nicotine replacement options, which have not been found to be effective during pregnancy (Coleman et al., 2011; Myung et al., 2012). The leaflet reflects the general lack of evidence on the effects of using e-cigarettes over the long term. Health care providers need to be vigilant with women who do not consider themselves as smokers due to using e-cigarettes and provide consistent advice. Smoking cessation or reduction will benefit the mother and foetus during pregnancy; however, those using e-cigarettes should be made aware of the risks associated with nicotine and supported to quit or reduce their use. The early postnatal period offers an opportunity to strengthen the resolve of quitters and to actively support those with low self-efficacy to maintain abstinence, for the long-term benefits to the health of themselves and their infants, and to support initiation and maintenance of breastfeeding for longer.

Alcohol

Smoking, alcohol consumption and illicit drug taking (polysubstance use) can often occur together making it difficult to identify the specific effects of each element.

Smoking appears to confer the greatest risk for SIDS (Blair et al., 1999); however antenatal alcohol consumption is known to affect foetal development directly and can, therefore, be a cause of perinatal mortality (Duncan et al., 2008). Duncan et al. (2008) noted in her study of American Indians that SIDS cases were more than three times as likely to have been exposed to antenatal binge drinking. The combined effects of polysubstance use have been shown to increase the risk for SIDS, but there are specific risks that are linked with alcohol and drug use such as a reduced level of vigilance and arousal and impaired parental decision-making (Friend, Goodwin and Lipsitt, 2004; Odendaal et al., 2009).

A large population study in Western Australia examined the correlation between diagnosed alcohol-use disorder (using ICD-10 diagnosis codes) and infant mortality (O’Leary et al., 2013). Using multiple registry data sources over a twelve-year period, the study revealed that 25% of infant deaths classified as SIDS could be related to a maternal alcohol problem. The study also found that mothers with a diagnosed alcohol problem when compared to the control group, were more likely to be single (32.8% vs 20.9%), have or have had, a history of an illicit drug problem (31.6% vs 2.5%), have a mental health diagnosis (43.4% vs 10%) and have smoked during pregnancy (56.7% vs 28.9%). When the alcohol-use problem was diagnosed before or during pregnancy, the risk of SIDS increased four-fold after adjusting for smoking during pregnancy. Information about bed sharing was not available to the researchers. When parents or caretakers consume alcohol, the risk to the infant is increased. Impaired judgment may influence poor decisions regarding the infant sleep environment (Burd and Wilson, 2004; Naimi et al., 2003); and the risk for SIDS is particularly high for infants who share a bed with a parent who has consumed alcohol, with the risk to the infant increasing with each extra alcoholic drink consumed (Carpenter et al., 2004; Phillips, Brewer and Wadensweiler, 2011). It is well recognised in the literature that alcohol use by women during pregnancy and after birth is modifiable and is potentially a marker for impaired parenting. However, alcohol use is often under-reported by service users, particularly when this behaviour is not viewed as socially acceptable, for example during pregnancy (Bailey and Sokol, 2011; Burd and Wilson, 2004; Naimi et al., 2003). Current Government guidance on alcohol consumption during pregnancy states that

alcohol should be avoided (DH, 2016: P6), however, if the woman continues to drink, the advice is not to exceed 1 – 2 units/day and avoid binge drinking which is defined as consuming 7.5+ units at one sitting. This guidance also warns against under-estimating consumption. Alcohol use, unless problematic, can also be difficult for professionals to detect and therefore give appropriate advice and support. A large survey of health professionals in Australia examined their knowledge about foetal alcohol syndrome. The study found that although the majority believed that recognition of alcohol consumption would contribute to a better care plan, and 85% agreed that foetal alcohol syndrome was preventable; 53% said that making a diagnosis might be stigmatising, and only 2% of health professionals felt able to talk about an alcohol issue with service users (Payne et al., 2005). The Family Nurse Partnership which provides intensive parenting support to vulnerable young mothers also reported that changing alcohol use by pregnant teens was problematic; in a randomised controlled trial examining improvement in antenatal outcomes for teenagers, the study found that smoking rates improved but there was no improvement in alcohol use (Olds et al., 1986). Alcohol consumption is, therefore, a recognised modifiable risk factor for both SIDS and non-SIDS mortality and morbidity in infants, and the consequences of impaired parental judgment and reduced levels of supervision can also increase the risks for infants and children. Identification of an alcohol problem can be challenging for professionals and is unlikely to be disclosed readily by a pregnant woman due to the social unacceptability of drinking while pregnant. Professionals have also identified that they feel uncomfortable confronting clients about their alcohol use, even though they are aware of the harmful impact that alcohol use can have on the developing foetus and risks to the infant once born.

Drug Use

Data from the CESDI (Confidential Enquiry into Stillbirths and Deaths in Infancy) study during 1993-95 identified maternal drug use as a significant risk for SIDS that remained so after adjustment for smoking. Cannabis use was the most common, and the study determined that 6.8% of mothers of SIDS infants used drugs during pregnancy compared to 1% of control mothers (Blair et al., 1996). Klonoff-Cohen and Lam-Kruglick (2001) also found that cannabis was more commonly used, but

by fathers, and found a significant association with paternal cannabis use and SIDS. However, the researchers found no association between maternal recreational drug use and increased risk for SIDS when other risk factors were present, such as young age, low educational level, alcohol use during pregnancy, sleep position and co-sleeping. Burns, Conroy and Mattick (2010) found that pregnant women on a methadone programme had a higher rate of SIDS compared to infant deaths of all other mothers and that pregnant women on methadone were more likely to smoke during pregnancy.

In a study of pregnant and new parent adolescents (mean age of 15.9 years) on a parent support programme in North Carolina, USA, Sangalang and Rounds (2005) compared self-report cigarette, alcohol, and other substance use antenatally, or on enrolment of new parents on the programme, and one year after birth. Most participants reported that they did not smoke cigarettes, use alcohol or other substances, but a year later a significant number of adolescent mothers from both groups reported smoking, using alcohol and other substances, demonstrating a significant increase in usage across all substances. As this study analysed self-reported data, there is the potential that these data are unreliable given the nature of the enquiry and base-line usage may have been higher. Also, the participants may have felt more comfortable sharing this information after a year in the programme, or the pregnant adolescents may have quit these behaviours during pregnancy but returned to them following the birth. However, there is a body of literature that demonstrates adolescent mothers' increased use of cigarettes, alcohol and drugs after having a baby, due to a number of identified stressors such as isolation, marginalisation and poverty and attempting to regain their previous pre-pregnancy identity and peer group status (Banwell et al., 2006; Barnett et al., 1995; Dowdell et al., 2009; Kaplan et al., 2001). It is important to highlight that as these young parents age, their ability to access and purchase cigarettes, alcohol and other substances increases.

The implications of drug use during pregnancy are not as well understood as they are for the effects of nicotine and alcohol, but a reduction in parental capacity with drug use is likely. As previously stated, women who use drugs are more likely to

smoke and drink alcohol, and drug use is a potential marker for risky lifestyle choices and other poor parenting practices.

Maternal Age

Young maternal age at delivery has also been shown to increase risk, with the SIDS rate highest among infants of mothers younger than 20 years of age, at 0.8/1,000 live births and the rate for 20 – 24-year-old mothers at 0.55/1,000 live births (Office for National Statistics, 2015). Younger mothers are less likely to be engaged in study or employment and have a reduced capacity to support themselves or a child practically or financially. However, an exploration of narratives from young mothers reveals that becoming a mother at a young age is not always the disaster that is commonly constructed within the media, cultural norms or social policy; however, it is not without its challenges which are explored in more detail in the next chapter on young mothers.

1.4 Chapter Summary

This chapter has presented the evidence that underpins the current understanding of the factors known to increase the risk for SIDS. The risk factors were outlined, using the triple-risk model, for the infant, the physical sleep environment and social factors and parenting practices. Social factors and infant-care practices that increase the risk for SIDS correlate with socio-economic group, with families in the lower socio-economic groups being more likely to participate in behaviours and infant-care practices that increase the risk for SIDS. Young maternal age is also consistently related to increased risk for SIDS. From being more likely to smoke, use drugs and alcohol, to having lower levels of initiation and maintenance of breastfeeding; young mothers are also reported to have limited resources in terms of educational achievement and income, and recent research has identified that young mothers have less knowledge of risk reduction strategies for SIDS.

The combined multiplicity of identified social risk factors, infant-care practices and harmful parental behaviours that endure during pregnancy and the postnatal period, have a significant impact on creating or minimising the risk of SIDS for infants in these high-risk families. The following chapter explores the perspective

of young mothers, mothers' knowledge of SIDS risk reduction strategies, decision-making processes and achieving behaviour change.

CHAPTER 2. YOUNG MOTHERS

2.0 Introduction

In this chapter, the social construct of the young mother is considered, both from the perspective of current cultural stereotypes and social policy to narratives from young mothers themselves. For clarification, the term young mother is used to include young pregnant women and mothers from early teenage years into their early twenties. The terms 'teen', 'teen mother' and 'teenage pregnancy' are more usual within the media, government policy, and quantitative research publications, and may be used in this section specifically to convey the wording used in relevant policy documents and research. The term 'young mother' is more commonly found as a descriptor in qualitative, participant-centred research that aims to understand the perspectives and lived experiences of those participants and is the term of preference that is assigned to research participants and the broader population of interest for this study. This chapter also considers models of decision-making relevant to the cognitive development in young people and the challenges of motivating and sustaining behaviour change in groups considered to be high risk and explores the characteristics of some successful health education interventions. The chapter concludes by drawing together the literature review from chapter one and the content of this chapter, to identify the research questions and justify the requirement for this research.

2.1 The Social Construct of Young Mothers

Young maternal age has been identified, along with other vulnerabilities, as a risk factor for SIDS and as such identifies the participant group for this study. The following review examines the current construction of young mothers in the literature, media and social policy and the experiences of young mothers themselves. Much of the evidence to support teenage pregnancy policy is from quantitative research, which supports negative stereotypes and values education and economic contribution rather than early parenthood. The voice of the young mother presented in qualitative research presents an alternative construction. The term 'teen' covers a wide age range and encompasses a broad developmental

stage. Teenage and young mothers in their early 20s tend to be grouped in the literature, social policy and the media as a social problem, portrayed by a negative stereotype of the young parent as deviant, unproductive, promiscuous and irresponsible, dependent on benefits, with associated low aspirations and a range of poor outcomes for their children. However, these young mothers are not a homogeneous group, and this popular viewpoint fails to consider the age variation within this group, their marital status, socio-economic situation, or that early parenthood may be a choice (Arai, 2007; Duncan, 2007; Wilson and Huntingdon, 2006; Yardley, 2008). The social construction of mothering is presented as a demanding task performed by appropriately aged and competent women; however, the experience of motherhood has been reported as frustrating, isolating, exhausting, depressing and difficult. Women of all ages and from all sections of society can struggle with what is expected of them as a 'good mother', but some sections of society just do not fit the 'good mother image', for example, teens, drug and alcohol users and those living in poverty (Banwell and Bammer, 2006; Mills et al., 2012).

While poor education and economic outcomes for young mothers may be a result of pre-existing poverty rather than the pregnancy occurring at a young age, there are multiple factors, including individual choice and decision-making, that superimpose the prevailing socio-economic conditions experienced by the young women who get pregnant, and to focus on socio-economic factors is an oversimplification of the issue (Barcelos and Gubrium, 2014; Yardley, 2008). The construction of the negative stereotype is, therefore, more about disadvantage than the young age of the mother and as such presents a distorted view (Breheny and Stephens, 2010; Duncan, 2007; Leese, 2014; Wilson and Huntingdon, 2006). In Rolfe's study (2008), young mothers wished they had waited until they were older to have a child mainly due to the impact on financial resources and career opportunities; however, they were happy being mothers and perceived themselves to be aspirational but just achieving things in a different order. Similarly, Leese (2014) found young mothers were proud of whom they had become but regretted not knowing whom they might have been, but all had high

aspirations for their children and wanted to provide what they thought their children needed.

Young mothers are the object of derision and marginalisation due to their apparent resistance to the socially acceptable trajectory of finishing education and entering the workplace to make an economic contribution to society before planning for parenthood (Duncan, 2007). From the decision to proceed with the pregnancy, the young mother is justifying her actions and decisions to a critical public and professional audience that can trigger the use of defensive behaviour strategies in response to the constant negativity (Mills et al., 2012).

Influences on becoming pregnant at a young age are not just economic, in some communities' early parenthood is the norm, and is valued and accepted as a positive choice. This acceptability of young parents within communities and visible external support for young mothers may influence their decision to continue with the pregnancy. Professionals were more likely to view young mothers as vulnerable to community influences than the mothers themselves, and although these young women sought advice and consulted within close personal relationships, ultimately, they made the important decisions themselves, generally after some consideration of the implications. There was little evidence that peers or the nature of the environment further influenced their decisions,

"... people in deprived areas are often depicted as having no sense of agency. The idea that teenage mothers might be active, rational agents capable of making their own choice, are often overlooked." (Arai, 2007 p.96)

However, remaining in a community and possibly living at home can bring other challenges in the form of family legacies. Young mothers can recognise poor parenting, and most wish to improve on the parenting they received if they deem it inappropriate but achieving this, in reality, is difficult unless the parent is 'consciously corrective' with their parenting behaviour. It is particularly difficult to change their parenting style if the young parent is in close contact with their own, abusive or neglectful parent (SmithBattle, 2006). SmithBattle identified that young mothers might dismiss certain advice from professionals on parenting if this

conflicts with their experience within their family. Young mothers may also find it very difficult to over-rule the advice and instruction of family elders, especially if the young parent is still living at home. This may be a source of frustration for the professional trying to communicate health education messages but failing to take account of these subtle familial influences.

2.1.1 Early Motherhood - A Landmark Event

Despite the prevailing negative stereotypes, early motherhood has been described as a landmark event. Linked positively to a teenager's development and transition to adulthood, bringing a new sense of responsibility and purpose, and the motivation to change behaviours such as bingeing on alcohol with their peers, taking drugs or becoming involved in risky and criminal activities (Barcelos and Gubrium, 2014; Black, Devereux and Salvanes, 2013; Fletcher, 2011; Macvarish, 2010a; Wilson and Huntingdon, 2006). Young motherhood precipitated aspirations for the future, to return to college or get a job to support their child. Parenting was also more likely to be viewed as more valuable an occupation, providing purpose and identity as a mother, than getting a low paid job or remaining unemployed (Duncan, 2007; Mills et al., 2012; Rolfe, 2008).

2.1.2 The Voice of Young Mothers

There is a growing body of qualitative research giving a voice to young mothers; many of these reports contrast starkly with the current view represented in the literature and social policy that is largely based on quantitative research (Duncan, 2007; Wilson and Huntingdon, 2006). Young mothers were well able to understand the negative stereotype and offer an articulate account from their perspective, that differed from this popular media image (Banister, Hogg and Dixon, 2012; Barcelos and Gubrium, 2014; Mills et al., 2012; Nayak and Kehily, 2014). Many young mothers reported experiencing higher levels of criticism of their choices, parenting skills, knowledge and ability than older mothers (Ellis-Sloan, 2014; Macvarish, 2010b). They felt their parenting was under intense public and professional scrutiny, which increased stress for them. Young parents have to be seen to be perfect parents while coping with limited resources and support; they are concerned that at any opportunity social services will intervene and, they

may lose their children. These reported stresses potentially detract from the enjoyment of the parenting experience for these young mothers (Mills et al., 2012; Whitley and Kirmayer, 2008). Young mothers also described feeling 'not permitted' to enjoy their pregnancy or planning for motherhood, their pregnancies were much less celebrated by others than for the older mother who is more socially accepted as being 'ready' for motherhood. Most pregnant young women enjoyed the physical presentation of pregnancy, however, for some the 'baby bump' presented a visible target which attracted critical judgement from the public and occasionally professionals, and therefore became a source of shame for them; some pregnant young women hid away from public, or 'disguised their bump' to avoid confrontation (Ponsford, 2011). These feelings were also expressed by older mothers in their 20's who felt they were a 'respectable age' to be having children and should not be judged by the public.

When given the opportunity, young mothers were keen to put the record straight, providing a narrative to counter the negative stereotype. Pregnancies may not be planned but are not unwanted; often the rational choice for them was not abortion. Young mothers were generally in long-term relationships with the father at the time they conceived, those who were single offered valid reasons such as an abusive partner, the father taking drugs or involved in criminal activity, which they did not want for their children. Young mothers felt they had to justify continuing with the pregnancy as the responsible thing to do, but in doing so, the prospect of parenthood gave them purpose and identity, and many viewed staying at home with a child until school age was a worthy occupation (Alldred, 2011).

Many of the young mothers in these qualitative studies thrived during pregnancy, adapting to their circumstances and managing stigma. Young mothers were able to demonstrate an ability to manage scant finances and put the needs of the baby ahead of their own (Banister, Hogg and Dixon, 2012; Mills et al., 2012; Ponsford, 2011). Young mothers preferred to invest in new clothes and equipment for their infants, as an outward demonstration to the critical public that they were able and responsible parents (Nayak and Kehily, 2014). Young mothers believed that presenting a clean, well-dressed baby with new clothes was very important to promote the image of the caring, capable and competent mother; it was

important what people thought, as making a good impression may deflect criticism.

Engagement with professionals whose attitudes are likely to be embedded in the middle-class norm, can alienate young mothers and prevent them from accessing services which can impact on their health and wellbeing, and their experience of early motherhood. Low self-esteem, lack of confidence and a perceived lack of ability to be a good mother undermined these young women's experiences and could have been different if the negative stereotype was less dominant (Leese, 2014); and young mothers experience further criticism when they do not engage with services from which they feel alienated (Arai, 2007; Ellis-Sloan, 2014; Leese, 2014; SmithBattle, 2013). While the majority of young mothers adapt well to the role of parenting, some struggle to cope and may feel alienated from service provision or may reject support perceived as authoritarian and feel they lack control over their own lives; for these young women, the transition to motherhood is challenging.

2.1.3 The Challenges of Young Motherhood

While the research presented so far generally offers a positive narrative of the transition to motherhood, many young mothers have a more challenging experience that may conform to the constructed stereotype. In her study, Leese (2014) found that the young women regretted getting pregnant and had difficulties making the transition to motherhood, but many were also battling addictions, poverty, isolation and criminal associations. A study by Dowdell et al. (2009) exploring the transition to motherhood by drug-using women aged between 15 and 35 years (35% participants aged 15 – 25) found an initial intense focus on the baby and meeting their needs; the baby was instrumental in motivating them to decrease or stop using drugs. Very few women stated they used drugs in the early postnatal period, however, as time progressed the stress of mothering increased and the pressure to return to drugs as a coping mechanism often became 'all-consuming' for them. The study also found a lack of motivation to 'act' on health advice such as obtaining contraception or antidepressants. These women were also isolated from their social networks, which were often other drug

users, and their families had ostracised them for their drug lifestyle. As time passed, these women reported feeling more 'out of control' and were more likely to return to drug use; this crisis point was identified to occur at around four months after birth. At this stage, for some mothers, the risk of their baby being removed from their care motivated them to take positive, remedial action and a key factor in their success was the nature of the support network available (Dowdell et al., 2009). Other young mothers were isolated because they no longer identified with their school friends or did not want to be associated with other young mothers due to the prevailing stereotype, but did not fit into other mother's groups, or an individual may be excluded from a group of young mothers due to drug use for example (Leese, 2014). Isolation is further perpetuated if the young mother is housed away from supportive networks; travelling back to see family and maintain friendships not only impacts on scarce financial resources but also may unintentionally influence the infant sleep environment if the mother decides to stay overnight with family or friends without proper sleep provision for the infant. Despite the difficulties faced by some of these young mothers, where the provision of basics such as a place to stay for the night and money for food take priority, Leese (2014) found that there was still a high level of infant care and quality interaction between mother and child in these challenging circumstances.

2.1.4 Young Mothers Summary

This section has explored the social construct of the young mother; the current cultural stereotypes and social policy offer a negative view of young mothers as a social problem, often classifying them together and failing to acknowledge the broad developmental age range or the varying circumstances around becoming a young mother. Young mothers themselves are aware of the current cultural stereotype and are keen to offer an alternative narrative of their experience within this context. Young mothers present themselves as worthy of taking on this role and may need specific support and acceptance to facilitate this, however, this is not always available, and young mothers express feeling judged by both society and professionals for the decisions they make. Young motherhood is not without its challenges, vulnerable young women already struggling with complex issues,

found that their situation was compounded by having a baby, however, some were motivated to change their behaviours, where others struggled to do so. The literature supports that most young mothers are well able to make their own decisions and offer sound rationale for these decisions, however personal resources and external factors influence the decision-making process and can have a significant impact on their ability to modify behaviour identified as increasing their risk for SUDI and SIDS.

2.2 Decision-Making

A number of key elements and pathways have been identified in the decision-making process; decisions made by individuals are affected by three sets of factors: features of the decision, situational factors, and individual differences. A pathway from goal setting to implementation (Anderson, 2002; Byrnes, 2002), and 'deliberation and determination' have been identified as necessary 'phases' of the decision-making process, where the individual gathers necessary advice and information to support the decision (Elwyn and Miron-Shatz, 2010). This section presents three relevant conceptual models of decision-making, the 'economic rational', the 'dual process system' and the 'cognitive system'; and considers a number of key external factors that may have an impact on mother's decision-making that may influence infant-care practices, and behavioural and lifestyle choices. A number of issues directed the literature search, including to what extent does age, cognitive maturity, level of education and life experience impact on adolescent and young adult's decision-making, and what is the relevance of peer influence.

2.2.1 The Economic or Rational Choice model of Decision-making

The economic or rational model represents a cost/benefit analysis where the individual assesses all options in a logical sequence before a decision is made, generally accepted to be the best decision to maximise benefit to the individual. Amaya-Amaya, Ryan and San Miguel (2005) in a large quantitative study examined the use of the economic model to identify what makes people's decision-making 'irrational' when their selection of choices does not follow the expected 'rational and logical' sequence. This study found that only a small minority of respondents

departed from rational decision-making processes and the more complex the choice, the more likely the departure from the expected decision pathway, however, the participants were second-year undergraduate psychology students. Similarly, Rational Choice Theory argues that practical rationality in decision-making follows a logical sequence following certain rules, irrespective of context, suggesting decision makers will always follow the same algorithm for every decision.

Psychologists have questioned these prescriptive models of decision-making. Suggesting that in the real world these processes are cumbersome and may be less efficient if individuals apply this process to every decision they make each day, nor do these models take in to account the multidimensional factors that influence an individual's decision-making capability, adequately reflect cognitive functioning or consider external environmental influences. There are many theories and models of decision-making presented in the literature; the following sections present two broad psychological models in contrast to the economic model, the dual process system and the cognitive system.

2.2.2 The Dual Process System of Decision-making

The dual process system of decision-making includes experiential (heuristic) and analytic processing systems. Experiential responses are rapid and formulated from 'previously stored' episodes and learning, whereas the analytical process is slower and consciously developed. Dansereau, Knight and Flynn (2013) suggest a third element, which is the development of 'wisdom over time'. Both Dansereau, Knight and Flynn (2013) and Gibbons, Houlihan and Gerrard (2009) studied adolescent decision-making behaviour related to risky behaviour and health education strategies. Gibbons, Houlihan and Gerrard (2009) found that the selection of healthy behaviour is a deliberate decision-making process that involves consideration of behavioural options, anticipated outcomes, and is more strongly associated with self-efficacy; this suggests a reasonable alignment with the rational decision-making models. However, this process is much less effective in risky health behaviours because engagement in these behaviours are less reasoned or pre-meditated, and are often associated with opportunity, impulsivity

and peer influence in adolescents. Impulsivity may also be associated with less mature cognitive executive functioning and reactive, unexpected or unintentional behaviour as the outcome (Blakemore, 2018). A study by Luciana and Collins (2012), found that adolescents were very competent in their levels of cognitive executive functioning related to decision-making, but their self-regulation was less effective under conditions of stress or multiple and complex decision-making requirements. This may be an important factor in the decision-making capability of the young new mother, her cognitive decision-making may be generally competent but undermined by tiredness and the need for sleep; selection of the easy or best option to achieve sleep may not be the safest for the infant. Dansereau, Knight and Flynn (2013) also identified that it was necessary to 'teach' adolescents the analytical processing element to support them to make better decisions and involve less 'trial and error'. This dual system process focuses on the individual's experience and analytical ability as the components of decision-making and does not take account of the individual's cognitive developmental capacity for adaptation to their environment or that the environment may have a significant influence on their decision-making.

Evolutionary psychologists considered that the cognitive developmental capacity of the individual to evolve and respond to the environment were vital components of the decision-making process and offered the *cognitive system* to counter the dual system model.

2.2.3 The Cognitive System of Decision-making

The cognitive system offers two theories, Bounded rationality, and Ecological rationality; both propose that the individual has domain-specific 'chunks' of knowledge, which can be added to and refined over time with experience, and these chunks of information become the building blocks that inform decision-making that 'short-cuts' the more lengthy, rational process of analysing all the options (Gigerenzer, 2008). Simon (1972) questioned the assumption of the 'perfect rationale' of the economic model and developed a model of 'bounded rationality'. Bounded rationality proposes that when individuals make decisions, their rationality is limited by a number of factors: the information they have, their

cognitive limitations, the time available and the task or importance of the decision. Given this complexity and the limitations of operating in the real world, people may only seek a satisfactory solution, they develop an 'adequacy' criterion to decide whether an alternative is satisfactory, and they choose the first option that fulfils this criterion, they choose the good enough, not necessarily the 'best' option. The adequacy criteria also vary according to the expertise of the decision maker, characteristics of the environment, and the task and information available so far. Therefore, a relatively good decision can be made without analysing all information and people will search out what information they feel they need to make the 'good enough' option selection. This model offers a more credible option for real-life situations when individuals' abilities and expertise differ, and limited time and resources do not allow for consideration of all the options available, or when decisions are based on regular and familiar activity (Campitelli and Gobet, 2010). The sleep lab study by Volpe, Ball and McKenna (2013) provides a good example of this decision-making process; they observed a number of strategies used by the mothers to minimise their sleep disturbance that increased the risk for the infant. The study concluded that mothers assess the immediate 'costs and benefits' of the given situation and make decisions based on 'relative risk'.

Ecological rationality (Gigerenzer, 2008) states that the rationality of a particular decision depends on the circumstances in which it takes place rather than fulfilling the required logical process as proposed in Rational Choice Theory. This decision-making approach can be related to the 'one-off' decision a mother may make, for example, to bring the infant into bed with her, or the decision to sleep on a friend's sofa with her infant. She may consider that she is making the best decision 'relative' to the circumstance and environment in which that decision is being made.

An important aspect of the cognitive system is the gathering of relevant information from external sources, such as advice from others, to support the decision-making process. Individuals learn to trust certain sources and assign a weighting to different information sources. In some circumstances, people still seek advice and information even when they have sufficient evidence to make a decision (Collins et al., 2011). In adolescents, Byrnes (2002) found that they

preferred to seek advice from familiar inexperienced sources, such as peers, rather than seek advice from non-familiar experts. This will have an impact on the accuracy and quality of the information the individual is operating with, and they may make decisions based on this. In the case of young mothers, they may also be seeking advice from inexperienced sources that may significantly influence their infant-care practices. In a recent study by Pease (2015), mothers cited obtaining information about safe sleep mostly from leaflets (65%), followed by family members (44%) and the Internet (40%), however, mothers identified at higher risk for experiencing SUDI were more likely to go to family members (52%) and less likely to use the internet (34%), or seek out any other sources of information. There is little research on how individuals integrate information to make decisions or how they decide on which information sources to trust and which to reject. Collins et al. (2011) found that when personal experience and advice conflict, individuals may rely more on their interpretation of the available information. This finding was echoed by SmithBattle (2006) when exploring issues in family legacy, young mothers were more likely to go with family advice or rely on their personal experience rather than accept advice from an external, less trusted source, this was also supported by Pease (2015) and a more recent study by Moon (2016). Families' belief systems and their culture of parenting can be a significant factor in influencing decisions regarding infant-care practices. Epstein and Jolly (2009) demonstrated a correlation between parent's beliefs and infant-care practice. Parents who want to continue a certain practice may choose not to believe the evidence-base that highlights the risk of that practice, professionals who continue to offer guidance against that practice, therefore, have to negotiate a change in the parent's belief that requires open dialogue. When searching for relevant information on a topic to support decision-making, Collins et al. (2011) found that people attend to different and new sources of information and assimilate it into their existing knowledge base to increase their knowledge foundation for decision-making. Using multiple sources of information can increase peoples' judgement confidence and information will have greater impact if a diversity of sources are found that reinforce the same information (Collins et al., 2011). The way information is presented can distract the individual from the more important

elements required to support the decision, paying attention to irrelevant features which get in the way of the true message or information required to support the decision is described as the 'framing effect' (Campitelli and Gobet, 2010). How information is presented is an important consideration when designing or engaging in health education conversation. Where too much information and a variety of topics is presented during a single contact with a client, the 'take-home messages' may become confused or lost within the rest of the conversation, and the client may be unable to assimilate all of this information effectively.

2.2.4 Decision-making Summary

From the literature presented here, it is clear that individuals are likely to employ each of these models at different times depending on the nature of the decision to be made and the context and external influences that may be present. Making decisions related to positive health behaviours is more aligned with the economic or rational model, requiring consideration of the 'costs and benefits' to that decision, whereas decisions that may have negative health effects are related to spontaneous activity, such as opportunity and peer group influence. However, from the literature on young mothers, there was little evidence of peer influence concerning important decisions these mothers made. The methods by which health education information is presented, received and understood, however, is significant. Health professionals are generally skilled at communicating health education messages, however, to ensure these messages are shared effectively requires an understanding of how information for decision-making is processed and what external factors of influence are at play. Translating health information and knowledge into a change in behaviour is much more complex and can be difficult to achieve.

2.3 Understanding Behaviour Change

Decision-making and human behaviour are inextricably linked, although understanding how these are related and what influences each component in individuals is not well understood (Appelt et al., 2011). The following section considers human behaviour and what motivates and supports behaviour change in vulnerable pregnant women and mothers. It includes an overview of strategies

and interventions that aim to change behaviour to reduce risks for SIDS; explores parental awareness and perception of risk reduction messages and considers the influence of health professionals and the impact of the media in potentially and inadvertently sabotaging SIDS risk reduction messages.

2.3.1 Behaviour Change Theory

Behaviour change theory attempts to explain why behaviour changes and what characteristics, or elements motivate and support behaviour change. A good understanding of behaviour change theory can facilitate the development of interventions to enable and support behaviour change in individuals for a perceived benefit. There are two components to behaviour change theory: first, that of describing and understanding the behaviour and second, how that behaviour might be changed, and which elements are important in achieving and sustaining a change in behaviour. Many behaviour change theories are presented in the literature, but some are more applicable to health interventions, for example, Social Learning Theory (Bandura, 1977), Social Cognitive Theory (Bandura, 1986; 1997), the Theory of Reasoned Action (Ajzan and Fishbein, 1980; Fishbein and Ajzan, 1975) and the Theory of Planned Behaviour (Ajzan, 1985 in Van Lange, Kruglanski and Higgins, 2012). Simplified, these theories describe that individuals learn through observation and social interaction with others, by experimenting with behaviours and receiving feedback, either positive or negative, which reinforces or corrects the individual's behaviour. More generally applied to child development, these theories also offer a basis for behaviour change at any age and therefore provide a good theoretical foundation for behaviour change interventions. Building on his social cognitive theory, Bandura (1986) proposed that the 'internal resources' of the individual, such as self-belief, perceived control and motivation, are important elements that influence their ability to engage in behaviour change. Ajzan and Fishbein (1980) developed this theory further by acknowledging that 'external factors' such as social acceptance of behaviours as the 'norm' and behaviour associated with peer group activity and identity can also have a significant influence on an individual's motivation and ability to engage with behaviour change. Each of these theories recognise that

personal investment is required to make a change to behaviour and both internal resources and external factors have a significant impact on the individual's ability and desire to engage with behaviour change.

2.3.2 Motivating and Supporting Behaviour Change

Pregnancy has been identified as a significant opportunity for health education and behaviour change (McBride, Emmons and Lipkus, 2003), and a range of strategies and interventions aim to encourage pregnant women and mothers to reduce behaviours associated with health and developmental risks. However, motivating and supporting behaviour change is a complex process, particularly when we consider that the experiences, motivations and internal resources of individuals will be different. Understanding the individual's 'readiness' and 'motivation' for change, from their perspective, is an important starting point for professionals. A range of models to support behaviour change are available, and a good example is the transtheoretical model of behaviour change (Fig 1.6.1) (Prochaska and Velicer, 1997), supported by tools that support identification and intervention such as the Five A's (Ask, Advise, Assess, Assist, Arrange follow-up) and the Five R's (Relevance, Risk, Rewards, Roadblocks, Repetition). The transtheoretical model used in conjunction with these tools has demonstrated efficacy when applied to interventions for drug and alcohol dependency and smoking cessation.

Figure 2.1: Transtheoretical Model of Behaviour Change (Adapted from Prochaska and Velicer, 1997)



Engaging and assessing the individual is the first step to encouraging behaviour change, and application of relevant and efficacious models and tools supports the behaviour change process. Interventions that have an explicit theoretical foundation have been found to be more effective than those that do not (Lumley et al., 2009). While some of the required behaviour change to reduce the risk for SUDI and SIDS is more difficult to achieve for some parents, such as quitting smoking, one might think that modification to behavioural infant-care practices may be relatively easy to achieve; placing the infant supine in their cot without soft, loose bedding, for example. However, there is sufficient evidence from child death investigations that suggest these practices are also difficult to change within vulnerable groups. Therefore, selecting the most relevant and effective methods to convey risk reduction messages, that have an impact are essential, and understanding which interventions work and why, is increasingly more important. Good evaluation of interventions that have had some success provides the evidence-base to professionals seeking to identify the most effective methods to reach traditionally hard-to-reach and high-risk groups with risk reduction messages.

2.3.3 Working with High-Risk Groups

The mass media 'Back to sleep' campaign of the early '90s had a significant impact in reducing the infant mortality rate with a clear and simple message. Since that campaign, other risk factors have taken on greater significance, and a range of factors now need to be incorporated into risk reduction and safe sleep messages. A population with specific characteristics has emerged over time as being at increased risk for SUDI and SIDS, and research within this group has further identified specific risk factors. An epidemiological definition of a high-risk group is a group of people in the community with a higher than expected risk of experiencing an event (Medical Dictionary Online, 2017); therefore, there is an ethical argument that supports directing health resources and education toward high-risk groups. However, the debate of universal versus targeted provision is contentious, labelling populations as 'at risk' or 'in need' of service interventions is problematic; at best, targeting provision critically focuses resources and supports the more vulnerable sections of society; at worst these populations are labelled, marginalised and stigmatised further. In relation to SUDI and SIDS, there is an evidence-base that identifies that specific behaviour and parenting practices increase risk. Young and disadvantaged mothers are commonly grouped and viewed as a high-risk group, lacking in parenting skills and requiring targeted intervention and monitoring. Mothers in these groups are often perceived as being resistant to changing their behaviour or infant-care practices; however, not all of those considered in the high-risk group are at risk, and considerable variations of risk occur within a population considered to be high-risk; this risk may also vary over time for individuals. These issues present challenges for professionals in understanding which interventions work, and which are considered relevant and acceptable to these groups in order to impact behaviour and infant-care practices effectively to reduce the risks for SUDI and SIDS further. Some evaluations have identified some key 'ingredients' from successful interventions with high-risk and traditionally hard to reach groups:

- **Interventions need to be ‘relatable’ to the ‘target’ group**

Interventions that meet the perceived need of, or are perceived to be, beneficial to the individual; or where individuals are motivated to change, are more likely to be successful (Cowan, 2015; Mills et al., 2012).

- **Voluntary participation**

Participants who are ‘compelled’ or ‘targeted’ to attend a programme may feel stigmatised and marginalised; or where the motivation or pressure to engage is external, it is unlikely to be considered relevant by the participant or support a sustained change (Romagnoli and Wall, 2012).

- **Participant engagement**

Some programmes may experience high rates of attrition due to the intensive nature of the intervention, or where it is viewed as intrusive or authoritarian, or participants may become non-compliant when they perceive the intervention as ineffective (DH, 2012).

- **A credible provider**

The relationship between the provider and the recipient can impact on the acceptability and success of an intervention. Peer mentoring can be successful and cost-effective in a wide range of health behaviour change programmes (Anderson, Johnson and Batal 2005; Gilchrist, 2016; Petosa, 2014); however, Olds et al. (1986) stated that the success of the Family Nurse intervention in the USA was dependent upon the knowledge and skills of the trained provider.

In summary, interventions that are perceived as relevant and meet the needs of participants, and those that are delivered with sensitivity towards the circumstances of the recipients are more likely to engage with the target group and encourage behaviour change that is sustainable because the participants value it. Interventions to support parenting or to modify behaviour are not usually universal services; there is an element of gatekeeping, often a ‘need’ has to be identified and a professional referral made. Access to some of these services may carry with them a stigma that may deter those who could benefit most (DH, 2012).

2.3.4 Risk Reduction Strategies and Interventions: What Works?

A range of current interventions aimed at motivating and supporting behaviour change exist, where the objective is to reduce the risks, and improve maternal, foetal and infant wellbeing. Interventions range from local safe sleep campaigns, reminiscent of the national mass media 'Back to Sleep' campaign in the early '90s (Coventry, Solihull and Warwickshire SCB, 2014; Lancashire SCB, 2014; Salford SCB, 2014), to local initiatives aimed at specific populations, groups or individuals. Strategies and interventions directed at changing specific behaviour and infant-care practices to reduce the risk for SUDI and SIDS include smoking cessation and promoting smoke-free homes, preventing hazardous sleep environments and dangerous co-sleeping, and promoting breastfeeding and immunisation. Interventions can comprise a single or multi-modal approach and contain elements such as structured educational programmes, drop-in educational and support groups, home visiting programmes, counselling, telephone helplines, Internet resources, self-help materials and groups, pharmacotherapy, physical exercise, financial incentives and provision of equipment. Many and varied interventions are being delivered across the UK to address specific parental behaviours and raise awareness of the risks in the infant sleep environment; however, few evaluations of these interventions are published or are readily available (Peacock et al., 2018). An appraisal of systematic reviews of intervention evaluations reveals that often evaluations concern multi-modal interventions and it is, therefore, difficult to isolate which components are effective. Currently, much of the evidence relates to multi-modal interventions, acknowledging that some participant benefit was observed from the intervention; however, results were often inconclusive. In the current economic climate, it is essential that any public health strategies employed are effective, and where possible, must be based on the best available evidence in order to deliver the desired outcome effectively and efficiently, and to that end, more recent research is focusing on understanding the efficacy of specific components of an intervention.

Specific interventions that have evaluated well include:

- **Financial incentives** to encourage smoking cessation: Two studies by Higgins et al. (2012) and Tappin et al. (2015) found that the use of financial incentives was successful in helping women to stop smoking during pregnancy.
- **Provision of specific safe sleep information and a sleep space** – either cot *Cribs4Kids*® (Hauck, 2014), *Pepi-pod*® (Fig. 2.2) (Cowan, 2015) or *wahakura* (Fig. 2.3) (Tipene-Leach and Abel, 2010), or more recently in the UK, the baby box program has been introduced (see below). The *Cribs4Kids*®, *Pepi-pod*®, and *wahakura* projects provide equipment and specific safe sleep information to disadvantaged parents. These projects have been positively evaluated to increase parental awareness of creating a safer sleep environment, increased the number of infants placed supine for sleep and reduced the number of infants sleeping in hazardous co-sleeping situations. These are successful and popular interventions, accepted and used by vulnerable mothers and communities and safe sleep messages are translating into effective behaviour change.

Figure 2.2: *Pepi-pod*® (Cowan, 2015)



Figure 2.3: The wahakura (www.nzdoctor.co.nz)



- **'Baby Essentials Online'** (Cowan, Pease and Bennett, 2013) was a national online education programme to increase parental awareness of a safe sleep environment for all infants in Australia. The programme offered a convenient and cost-effective platform delivering a consistent, safe sleep message, with broad reach and large-scale participation. The programme successfully increased confidence among participants who engaged with the material for longer and for populations identified as having increased risk for SIDS.
- **A focused educational intervention with adolescents** in New Jersey, USA (Ostfeld, 2005) that aimed to raise awareness of the health risks related to SIDS, found that students who participated in the programme demonstrated increased awareness of health risks related to SIDS compared with same grade students and a convenience sample of parents.
- **Family Nurse Partnership** (Olds et al., 1986). Originating from the USA, this is a targeted, intensive home visiting programme for young, vulnerable, first-time parents, delivered between early pregnancy and the child's second birthday. Although some benefits were identified, such as improvements in early child development and increased self-efficacy of the mothers, no impact was observed for reducing the number of women who smoked in pregnancy, the number of small or premature babies born, nor was there a reduction in the number of women getting pregnant again within two years. Mothers in both the FNP and the control group (who received universal services) had the

same rates of breastfeeding at around 40% (Robling et al., 2016). FNP is more expensive than usual care and parents have to be recruited to the intervention, recruitment and retention were identified as problematic in early UK evaluations, partially due to the intensive nature of the intervention (DH, 2012).

- **A safe sleep assessment tool** developed in Derbyshire for midwives and health visitors to identify risks for SIDS has been incorporated into routine practice (Derby City and Derbyshire County NHS, 2014). An evaluation revealed that 84/88 parents recalled the assessment, and 17 parents did change their practice in some way (Sultan and Raju, 2016).
- **Baby boxes:** The cardboard baby box (filled with baby clothing, bedding, and toiletries) originated in Finland in the 1930s and was used as an incentive to encourage women to attend for antenatal healthcare. The subsequent fall in the infant mortality rate in Finland has been attributed to the provision of good healthcare rather than the box providing a safe sleep space (Cassin, 2017; Lee, 2013). However, several countries have adopted the baby box to tackle health inequality, but some are being marketed as a safe sleep intervention (Roger, 2017). The baby boxes have not been subject to rigorous safety testing and have yet to be appropriately evaluated for their claims for reducing infant deaths (Blair et al., 2018; Moon et al., 2016), however, they may reduce the number of infants placed to sleep in the adult bed (Heere, 2017; Peachman, 2017). The American Academy of Paediatrics and the Lullaby Trust in the UK currently warns caution with these boxes as an intervention to promote safe infant sleep, until further research evidence is available.

In the current economic climate, it is essential that any strategies employed are effective (Peacock et al., 2018). The recent safe sleep campaigns may have had some impact (e.g. Coventry, Solihull and Warwickshire SCB, 2014; Lancashire SCB, 2014; Salford SCB, 2014),, but we are still seeing too many potentially preventable infant deaths, and these are concentrated in the groups that experience the highest levels of deprivation (DfE, 2014; Garstang et al., 2016). Any intervention must be based on the best available evidence in order to deliver the desired

outcome effectively and efficiently, but we are missing something in reaching the most vulnerable families (Cowan, 2015; Caraballo et al., 2016; Mills et al., 2012; Pease et al., 2017a). The evidence is certainly strong regarding our knowledge of risk factors, but we seem to know less about how to encourage parents to modify their behaviour and infant-care practices to reduce these risks (The content from this section (2.3) has been adapted and published in Sidebotham et al. (2018).

2.4 Mothers Knowledge of Risks and Health Education

A study commissioned by the FSID (now The Lullaby Trust) in 2007, examined parents' awareness of the published guidance on reducing risk factors for SIDS, and whether awareness of these risk factors had altered infant-care practices. The study found that many parents in the lowest socio-economic group were failing to follow risk reduction advice such as avoiding prone sleep position, bed sharing and exposing the infant to cigarette smoke. The reasons parents gave for not following the advice were that they did not believe the evidence, or they were unconvinced of the associated risk with SIDS. 20% of parents did not believe the link between smoke exposure and increased risk of SIDS and 25% were not convinced of the risks of prone sleeping when their infants seemed to prefer this position and settled better. Using current statistics in 2007, the study claimed that over 50% of SIDS deaths could be prevented if parents followed the risk reduction guidance (Epstein and Jolly, 2009). Uptake of health education messages in the socially and economically disadvantaged is problematic, and uptake of risk reduction messages for the isolated young, unemployed parent is a particular challenge (Fleming et al., 2003). Current SIDS deaths in England and Wales are still highest amongst the lowest socio-economic group, especially to single mothers under the age of 20 years old.

While evidence suggests that a number of recent 'safe sleep' campaigns across the country have had some impact on parental knowledge of risk factors (Coventry, Solihull and Warwickshire SCB, 2014; Lancashire SCB, 2014; Salford SCB, 2014), a study in 2014 found that vulnerable parents' knowledge is still incomplete (Pease, 2014). Pease surveyed 400 mothers from deprived areas in Bristol, UK, about their knowledge of risk reduction strategies for SIDS; 12% of the sample were identified

to be at increased risk for SIDS using a previously developed algorithm (Blair et al., 2009; Fleming et al., 2000). Mothers in the high-risk group were reported to have less knowledge regarding the main SIDS risk reduction strategies and cited fewer risk factors than the low-risk group. Sleep position was identified by half of all the mothers as a strategy to reduce risk, but by fewer mothers in the high-risk group at 33%, compared to 54%. The side sleep position was viewed as acceptable by 49.8% of all mothers, and this finding was similar across both risk groups; however, the high-risk group was more likely to agree that prone sleeping was acceptable. Mothers in the high-risk group were also less likely to breastfeed (12% vs 37%) and more likely to smoke (83% vs 7%). Of the high-risk smoking mothers, 40% identified quitting smoking as a risk reduction strategy, but not to quit until after the birth (Pease et al., 2017a). This suggests that these campaigns, are either not reaching, or are not perceived as relevant (Pease et al., 2017b), to those who could benefit most from understanding the risks posed to their infants, of continued use of particular parental behaviours and infant-care practices.

2.4.1 The Influence of Professionals

Current indications also suggest that inconsistencies in advice from professionals exist and may result in families adopting unsafe infant-care practices, particularly if the parent has some doubt about the evidence-base for the intervention suggested (Epstein and Jolly, 2009; Hauck and Tanabe, 2008; Miller, Fraser and Moy, 2008; Ostfeld et al., 2010; Ward, 2015). Health care practitioners may give inaccurate advice due to the challenges of keeping up to date with the latest evidence-based or current recommendations (England et al., 2014) or may deliver the advice without providing an explanation, inviting discussion from the parent, or assessing which advice is most relevant to the parent at that time. Parents have expressed a need to understand why certain behaviours are harmful and why they should alter their infant-care practices (Pease et al., 2017b). Parents may be working under misconceptions, not fully understanding the rationale for some infant-care practices or suggested modifications to their behaviour, however, providing an explanation may be considered time-consuming by the professional, or they may not believe this is important or relevant to the parent. The

consequences of misinformation or conflicting information provided to and received by parents maybe that parents revert to more familiar behaviour or their cultural norm, which may be contrary to current, evidence-based advice (Collins et al., 2011; Smith-battle, 2006). Similarly, when lots of new information is provided, the parent is unlikely to be able to process it all and will prioritise what is relevant for them at that time (Pease et al., 2017b), potentially forgetting other useful information, or seeking confirmation with less credible sources such as their peer group (Campitelli and Gobet, 2010). This is a challenge for professionals who have to balance providing essential health education information alongside clinical care, during busy and time constrained contacts with women, particularly when face-to-face contacts may be infrequent.

Professionals may also be reticent to confront behavioural or risky infant-care practices with parent's due to fear of alienating parents or appearing critical of their parenting; or may not feel confident to tackle more sensitive issues, such as alcohol and substance use with a parent (Payne et al., 2005). Women who engage in behaviours that are not socially acceptable, illegal or that may result in increased scrutiny of their circumstances are less likely to disclose this information openly (Bailey and Sokol, 2011) and can be equally difficult for the professional to detect and challenge. Alternatively, parent's may proffer an explanation in support of their continued behaviour, Pease (2015) noted in her study, that some of the women she interviewed reported that they were advised by midwives not to attempt to stop smoking during pregnancy as it was too stressful. Similarly, practitioners need to explore behaviours comprehensively; merely asking whether a woman smokes, may not reveal the e-cigarette user (or vaper), who might consider herself to be a non-smoker, leading to a failure to understand the potential risks to her health and the foetus, and a missed opportunity for health education intervention.

Professionals have a responsibility to provide up to date and relevant information to parents to support their decision-making. In order to engage with the health education message, individuals need to acknowledge their behaviour and motivation to change, external influences can be strong motivators during pregnancy, but the woman's self-efficacy may be low (Bandura, 1997). Motivating

behaviour change can initially be time-consuming and require support that many health care practitioners may not feel able to give. There is a basis for asking women about their health and lifestyle, and behaviours that may impact on their health and the health and development of their infant during pregnancy and after birth. Once identified, these women require referral to appropriate services to support them to change their behaviour and make better decisions about their family health and wellbeing; however, due to financial challenges, relevant services may not be available, leaving the professional with an ethical dilemma. Giving information about the sleep environment also requires exploration of current behaviour and infant-care practice rationale in order to provide information relevant to the situation and the needs of the parent. Providing good evidenced-based information to parents supports better decision making, but this can be time-consuming for the professional; however, a targeted approach with families that require this extra support is likely to be a good investment of professional time in the long run (Barnes and Henderson, 2012; DH, 2012).

2.4.2 The Influence of the Media

Families may also be receiving contradictory messages subliminally from the media, perpetuating images of unsafe sleep environments. In a review of nine popular UK magazines: 500 images were found to show the infant sleep environment. 13% of images depicted a prone or side sleeping infant; 100% of images positioned infants at the top of the cot; 97% did not show the use of a pacifier, although the protective effect remains a contentious issue; and 21% depicted an infant with a hat or other head covering, with overheating as a known risk for SIDS (Epstein, Jolly and Mullan, 2011). The significance of these images and the influence on parents of perpetuating and normalising unsafe infant-care practices is irresponsible and disappointing. The large readership of these popular magazines offers an opportunity for effectively distributing safe sleep and risk reduction messages across all social strata, in particular images depicting celebrities and their babies can have a significant 'role modelling' influence for young mothers (Epstein, Jolly and Mullan, 2011; Goodstein et al., 2018; Joyner, Gill-Bailey and Moon, 2009; Joyner et al., 2014). These messages may be more

likely to be universally received via a range of media from popular magazines, the Internet, and more recently, TV reality shows about new celebrity parents and soaps, which may inadvertently reinforce unsafe practice, undermining the safe sleep advice from health professionals.

2.5 Infant Care Practices over Time

Changes in decision-making over time may be important in identifying subtle behaviour changes in infant-care practices. The period identified with the greatest risk of SUDI, between two and four months of age, coincides with increasing parental skills and confidence and a decrease in universal service contacts. The literature highlights that some parents were likely to change their infant's sleep position from supine to side or prone at around three months (Lesko et al., 1998) when professionals are perhaps less likely to follow up with safe sleep messages. The infant may be more likely to sleep outside of their usual sleep environment, staying with relatives or friends, for example; and the infant may be cared for by caregivers other than the mother who have their own ideas of infant care which may not align with current safety advice or what the infant is used to (Cote et al., 2000). Changes in infant-care practices during this time may inadvertently increase the risk to the infant. Information from this study may highlight the need to review the current strategies and timing for delivering risk-reduction messages, to assess whether these messages are perceived as relevant when they are delivered and whether health education should continue to be delivered to vulnerable families during the period of increased risk for SIDS.

2.6 Summary & Justification for Research

These first two chapters present the evidence-base for the identified risk factors for SIDS and demonstrate how the complex interaction of these factors can increase or decrease the risk of SIDS in vulnerable infants using the triple-risk model. Risk factors can be divided into the modifiable, such as smoking, dangerous co-sleeping, inappropriate bedding, parental alcohol and drug use; and the non-modifiable factors, for example, young, single mothers. The review has also identified that despite widespread awareness about the risks, many infants remain exposed to a range of risk factors, and most SIDS deaths now occur in

situations where risk-reduction measures have not been followed. SIDS deaths are more prevalent for young mothers of low educational achievement and who experience deprivation; young mothers are also more likely to engage in behaviours that increase the risk to their infants such as smoking, alcohol and drug use. The current cultural stereotypes and social policy offer a negative view of young mothers as a social problem. However, young mothers themselves are aware of this stereotype and offer an alternative narrative of their experience and present as worthy of taking on this role, often with minimal resources. Young mothers express feeling judged by both society and professionals and have to provide a higher standard of child-care to counter criticism levelled against them for being too young. Young motherhood is described as a 'landmark' event, and many young women make this transition successfully; however, some continue to struggle with issues that impact on their parenting role. Having identified the risk factors, and that risk reduction health education is available and universal, the next important question relates to mothers' awareness of these risk factors and how they translate that information into making decisions about the infant sleep environment and infant-care practice. Understanding how their choices - to continue to smoke during pregnancy, or to bottle feed, for example - impact the foetus and infant, are important considerations for this research. As part of the literature review, three conceptual models of decision-making were reviewed to facilitate understanding of young mothers' decision-making processes. Decision-making encompasses information gathering and assimilation, which is an important component of understanding how health education messages are delivered, received and processed. In order for health education messages to be received and understood, they must also be perceived as relevant. Mothers may not want to hear messages or may modify messages that criticise their choices. Given that infants continue to die as SIDS, often with modifiable risk factors present, risk reduction messages are either not reaching, or not perceived as relevant to this vulnerable group and infants continue to be exposed to a range of modifiable risk factors.

Much of the literature has been concerned with the scientific deduction of isolating risk factors, defining the population most at risk, assessing parental

knowledge, the delivery of health education strategies, and the design of risk assessment tools; the voice of the vulnerable mother related to risk reduction for SIDS was largely absent in the literature.

In order to further reduce SIDS rates, educational approaches need to be modified, which, in turn, means that a deeper understanding of what motivates and supports behaviour change in this vulnerable and high-risk group of parents is required. This study aimed to gather data using a qualitative and phenomenological approach, to understand the lived experience of young first-time mothers with identified vulnerability for SIDS, from their unique perspective. Also, to illuminate what was important for them in terms of their perception of, and the relevance to them, of risk-reduction messages, and to understand what influenced their decision-making related to infant-care practice in general, and the infant sleep environment in particular, and over time.

2.7 Research Questions

Primary Question:

What is the lived experience of young first-time mothers with an infant up to the age of six months? And in that context:

Secondary Questions:

What do mothers understand about what constitutes safe sleep for their infant?

And,

What influences their decision-making around infant care practices related to the sleep environment?

CHAPTER 3. METHODOLOGY

3.0 Introduction

Previous studies have ‘tested’ mother’s knowledge on safe sleep and risk reduction and identified common themes and risk factors by cohort and case study, questionnaire or structured interview. While these studies provide valuable information, I wished to elicit rich data from the personal perspective of the young mother to understand the complex interaction with knowledge of risk factors and application of this knowledge to the infant sleep environment. The research question, aims, and objectives determined that a qualitative and phenomenological approach was appropriate. In this chapter, the underpinning philosophical perspective is presented, and the identification of an appropriate methodology, Interpretative Phenomenological Analysis, is discussed.

3.1 Paradigm

Early scientific research has its foundations in rigorous experimental design that assumed that the world was ordered and regular and governed by natural laws that could be identified and tested. The researcher remained objective and distant from the subject of the investigation to ensure the credibility of the research results (Guba and Lincoln, 1994). The positivist paradigm is still held up as the scientific gold standard in research, and such studies have generated a significant evidence base in SIDS research and important related topics. However, the positivist approach is limited when trying to study the human condition (Guba and Lincoln, 1994). The post-positivist or qualitative paradigm offers a range of philosophical and methodological approaches for investigating the socially constructed reality of participants. Qualitative approaches also importantly acknowledge that the researcher inhabits the ‘lifeworld’ and is, therefore ‘situated in’ the research relationship bringing with them pre-existing knowledge, values, and beliefs which are likely to impact on the research process. Qualitative research aims to gather rich, descriptive data from the perspective of the participant, which therefore requires that the selection of the methodology supports and acknowledges this reciprocal relationship between the researcher and participant.

A qualitative approach was intended from the outset; therefore, the design and conduct of the research project and the methods for data collection and analysis should be consistent with the stated philosophical position adopted (Crossan, 2004) to meet the research aims and objectives, and answer the research questions. During the initial stages of the research process, early ideas and versions of research questions were critically appraised using three questions proposed by Guba and Lincoln (1994:108) to help to clarify the appropriate research paradigm and philosophical perspective:

1. The ontological question:

What is the form and nature of reality and what can be known about it?

2. The epistemological question:

What is the nature of the relationship between the knower and what can be known?

3. The methodological question:

How can the inquirer go about finding out whatever he or she believes can be known?

This process identified that a phenomenological approach was most aligned with the research question, aims and objectives (Crotty, 1998). Phenomenology also fits well with my professional role, I am familiar with the professional-client relationship, preferring to work collaboratively with the client, gathering information and assessing (interpreting), and proposing an appropriate intervention in negotiation with the client. This social relationship approach is 'built-in' to the methodology of phenomenology where the researcher and client collaborate to find meaning in the phenomenon. Beck (1994:508) states,

"Nursing is primarily a social act between nurse and client, phenomenological perspective can help increase nurses' understanding of their clients by entering into their lifeworld."

Research using phenomenology requires a holistic approach, understanding personal experience, and context, and reflecting on the researcher role, all of which are congruent with the nursing role (Gardner, 1996).

3.2 Philosophy

3.2.1 A Feminist Perspective

The feminist perspective focuses on gender and gender inequality issues but can also represent other marginalised groups identified as experiencing issues of inequality or a power imbalance in relationships. Feminist research also aims to provide the participants with the power or to empower them to change their circumstances or bring about some social change as an output of the research. Feminist researchers may also share personal experiences related to the topic of research with the participant in order to foster the reciprocal relationship (Harding, 1987; Liamputtong, 2007). While the theoretical perspective of this research project incorporates some of the foundational elements of feminist theory, such as giving a voice to an identified marginalised group and encouraging equality in the research process for the participants (Harding, 1987); gender as an issue, specific inequality or social activism was not the intended focus of this project. This project was concerned with the 'role' of the parent/ significant carer, and as such, 'mother' could be substituted with father/ other significant carer. Therefore, a feminist perspective has not been explicitly adopted for this research project; however, there are some shared principles between a feminist approach and IPA which are identified in section 4.5.2.

3.2.2 Phenomenology

Phenomenology is a philosophy, a methodology and a method which can cause some confusion when trying to present a clear philosophical perspective; there are also a number of schools of phenomenology incorporating both epistemological and ontological branches inspired by the work of philosophers such as Brentano, Husserl, Heidegger, Gadamar, Merleau-Ponty and van Manan (Racher and Robinson, 2003). There are as many interpretations of phenomenology as there are philosophers and although they share fundamental principles, each has distinctive characteristics, and the philosophy continues to be reinterpreted to the present day (Dowling, 2004; Mackey, 2005; Smith, Flowers and Larkin, 2009). The two main branches of phenomenology are eidetic or descriptive, and interpretive. Again, there can be confusion around these different

approaches for the novice researcher, particularly with reference to separating the elements between the philosophy and the methodology (Crotty, 1996). For clarity, I will concentrate on key philosophers relevant to this research project with the aim of presenting a logical justification for my philosophical perspective and choice of methodology.

Descriptive Phenomenology

Edmund Husserl (1859-1938) is credited as being the ‘father’ of phenomenology, publishing *Ideas: General Introduction to Pure Phenomenology* in 1913 (Dowling, 2007; Moran, 2000). Husserl was inspired by psychologist Franz Brentano’s work on the ‘principle of intentionality’. The principle of intentionality considers that every mental act is related to an object; therefore, all thinking is related to something – the internal experience of ‘being conscious’ of that something is described as ‘intentionality’. Husserl worked with intentionality as the central concept to understanding human thought and experience but, in the more positivist tradition, aimed to achieve this understanding through ‘rigorous and unbiased study of things as they appear’ (Converse, 2012:29; Dowling, 2007). Husserl’s descriptive phenomenology as a philosophy focused on ‘knowing the essence of a phenomenon’ rather than the individual’s experience of the phenomena or consideration of the context. By identifying the particular characteristics of an experience or phenomenon, isolating the essence of the experience, and transcending context, Husserl believed that the account might reflect the same experience of others (Blaikie, 2007; Smith, Flowers and Larkin, 2009). In order to achieve this ‘value-free’ description of the phenomenon, Husserl advocated the use of a technique termed phenomenological reduction or ‘bracketing’. By bracketing the ‘taken-for-granted’ world of the subject, and after following a prescribed set of deductions, the individual’s pure consciousness or essence of an experience or phenomenon would be revealed. This is an epistemological position, focusing on what can be ‘known’ about a phenomenon. In the methodological application of Husserlian phenomenology, the researcher is also required to be conscious of, and suspend or bracket personal attitudes, prejudices and reflections during the research process in the endeavour to identify

the 'uncontaminated' essence of the phenomenon, but also to achieve rigour and enhance credibility in the research (Blaikie, 2007; Dowling, 2007).

Martin Heidegger (1889-1976) was a student and later, assistant to Husserl. Heidegger developed a tangential view from Husserl, stating that first, we must seek to understand 'what it means to 'Be' [human]' before trying to examine what can be 'known' about existence (Crotty, 1996; Heidegger, MacQuarrie and Robinson, 1962). The premise of Heideggerian philosophy is fundamentally different from Husserl's, in that his focus was on understanding human experience related to the phenomenon rather than describing the characteristics of the phenomenon.

Interpretive Phenomenology

Heidegger's philosophy aimed to facilitate understanding of how the individual experienced the phenomenon by interpreting the meaning of the experience for the individual. Heidegger challenged the assertion that any description of a phenomenon that was *without interpretation*, was impossible; therefore, central to his philosophy is the concept of hermeneutics (the theory and methodology of interpretation), to reveal 'understanding of the meaning of Being', classifying his philosophy as *interpretive* rather than *descriptive* (Heidegger, MacQuarrie and Robinson, 1962; Kock, 1996). Hermeneutics is, therefore, the prominent element in the methodology aspect of interpretive phenomenology; where the reciprocal relationship between the researcher and participant is explicit and acknowledged during the research process, and relevant researcher fore-structures (knowledge and beliefs of the researcher) are exposed and acknowledged during the 'hermeneutic' analysis phase (Heidegger, MacQuarrie and Robinson, 1962; Koch, 1996). Heidegger's philosophy is ontological, in that the focus is on the lived experience of the individual – 'what is the meaning of Being in the world?', and the researcher is required to 'seek for understanding of the meaning of 'Being'' (Mackey, 2005:181). Heidegger's philosophy requires the researcher to adopt a particular approach to seeking the understanding of Being, which is both 'temporal' (time) and 'situated' (space), and Being-in-the-world, which is influenced by context-dependent knowledge, awareness, and relationships. Heidegger describes four philosophical concepts that should be demonstrated in

the conduct and analysis of the research to ensure philosophical-methodological consistency: *being-in-the-world*, *fore-structure*, *time*, and *space*.

Being-in-the-world: Heidegger's view is that the person is integral to, and interactive within their world, one does not exist without the other. Although Heidegger believed that there were many ways for a person to be-in-the-world, he considered that the most significant state of Being is to be aware of one's own 'Being'. Heidegger suggests that the researcher is able to access an understanding of 'Being' through describing an individual's account of their everyday experience of a phenomenon (Heidegger, MacQuarrie and Robinson, 1962). The individual's account of being-in-the-world' is 'the how they are and what they do before they think about it', where prior knowledge, experience, and prejudice are not explicit or described; this personal framework is referred to as fore-structure.

Fore-structure: Is prior knowledge, awareness, and understanding, brought by both the researcher and participant to the research process and forms the foundation to the interpretation of the subject matter. It is during the interpretation phase that the hidden, or unstated become revealed, and therefore the phenomenon is revealed. Heidegger described that these fore-structures could be revealed and made explicit through a circular interpretative process or hermeneutic circle.

Time: 'Being' is both 'temporal' (time) and 'situated' (space); where time is described as relative to the life course, and to external requirements to conform to time, such as office hours, calendar time relative to the menstrual cycle or the duration of pregnancy for example. Time links experiences from the present to the past and can influence the future; as such the awareness of time is experienced as continuous and has essential relevance to Being and where the person situates himself or herself relative to time.

Space: Situation, location, and context as related to the phenomenon are also important elements relevant to Being. How things are described in relation to the person, where the person situates himself or herself in relation to something or someone can be significant. Space can be described in terms of horizons; in terms of the phenomenon of interest, the person might relegate some things to the background and others are brought into the foreground, those in the foreground

may be of more importance or more relevant to the phenomenon, but equally, what is relegated to the background may become significant during interpretation.

Each of these elements should be explored and made explicit during the analysis phase to contextualise and understand Being and Being-in-the-world for each participant. As identified earlier, a key concept in Heidegger's philosophy relates to hermeneutics, which allows for the interpretation and illumination of understanding from the narrative text gathered from the participant.

3.2.3 Hermeneutics

Hermeneutics is the theory and methodology of interpretation. With its roots in the interpretation of biblical and philosophical text, modern hermeneutics encompasses the interpretation of a variety of communication media with particular attention to the use of language and meaning. Fundamental to hermeneutics are the assumptions that the world is experienced through language, and that knowledge and understanding are conveyed through language (Byrne, 2001). Similar to phenomenology, there are a number of schools of hermeneutics - objective, philosophical and critical, and a range of interpretations and applications have been described (Koch, 1996). Heidegger proposed philosophical hermeneutics as a theoretical approach to finding meaning in the lived experience of individuals, rather than a scientific method; however, hermeneutics has become an accepted research method more recently (Dowling, 2004). Heidegger described the 'hermeneutic circle', the activity of cyclical interpretation where the researcher moves back and forth between the participant narrative to conceptual themes and back again, refining and rethinking concepts, but remaining close to the original narrative. During this activity, both the participant and the researcher's fore-structure is likely to be revealed and are made transparent during this process.

Hans-Georg Gadamer further developed the hermeneutic aspect of Heidegger's work with a particular focus on 1. Prejudgement – preconceptions, prejudices, and linguistics that influence understanding; and 2. Universality - a common human consciousness that enables understanding (Ray, 1994). Gadamer argued that

through interpretation, one does not understand better, but understands differently. The researcher, through acknowledging personal prejudice this facilitates understanding and prejudice that obstructs understanding, is better able to achieve this understanding. For example, the researcher can bring expert knowledge and prior learning to the research relationship; this positions the researcher in a dialogue with the participant and their narrative, rather than merely being a data gatherer and observer, with the researcher's subjective treatment of the narrative later, during interpretation. The interpretation process is a constant feature in life as it is within the research process and permeates every activity (Dowling, 2004). Gadamer affirms the researcher position in the interpretive process and asserts the responsibility for understanding the meaning of things for others, is for the researcher to remain open to the perspective of others while acknowledging their own biases. Gadamer describes this as the 'shared horizon' (shared understanding) between researcher and participant and is the principle of a hermeneutic approach.

3.3 Ontology: a way of being in the world

The ontological position of this research is *idealist*, underpinned by the assumption that the external world is created by a set of representations and constructions developed by an individual and believed to be real by that individual. There are various subcategories within this position, the extremes of which are those who conform to the denial of the existence or relevance of the external world, *atheistic idealists*, to those who accept that individual's constructions of reality offer a different way to consider how people make sense of their world, *perspective idealists* (Blaikie, 2007). The idealist position acknowledges that people share their world with others, therefore live in a world of shared interpretations. How individuals interpret and construct meaning creates and maintains their social reality (Gergen, 2007). Given that this constructed reality incorporates social interaction with other people to contribute to the internal construction of the external reality for an individual, I have looked to interactional models of human development to think about the construction of reality for the population of interest in my research.

How the individual interacts with the environment shapes their development and affects their interpretation of the world, and therefore, individual's views of their world will vary depending on their experiences and learning during the years of childhood to young adulthood. Children and young people develop and learn by interacting with their environment, which includes family, peers, the local community and the influences of the social, political and economic context of the time. Two developmental theorists, Uri Bronfenbrenner and Albert Sameroff, have developed theories and models to support this bi-directional interaction between the individual and their environment. Bronfenbrenner (1979) described the interaction between the child and their environment in a systems approach in his Ecological model. From birth, infants begin to interact with their surroundings and grow and develop based on a range of learning, experience, and adaptations. Initially their systems are confined to the family; however, there is acknowledgement that the more distal systems, such as the economic context, will influence how the child experiences his environment; poverty, for example, is likely to affect the child directly. Sameroff (2009) develops further, in his Transactional model, the influences of the broader external environment and its impact on the individual's development and maturation of traits and personality. Both these theories acknowledge that individuals interact with, and are influenced by, their environment; the effects may be positive or negative to the individual and influence lifestyle choices. These theoretical models have shaped my thinking on development and adjustment to adulthood. When working with young parents, it is important to understand the foundations of their experiences and the influences on their development and construction of their reality, as these experiences will influence the individual's approach to parenting in the future (Smithbattle, 2006). Having a theoretical framework to understand how individuals interact with their environment and construct beliefs and behaviours, is useful in approaching this research when exploring how parents identify and make decisions about risk.

Young adults may have made choices to engage in behaviours that have an impact on their physical and mental health such as smoking, alcohol and drug use and their chosen peer group may validate those behaviours making it difficult for an

individual to want to change. Young adults who are facing imminent parenthood may not be equipped psychologically to make changes to these behaviours without specialist support. Two models that support behaviour change and acknowledge that individuals learn and are influenced by observation and social interaction with others are Bandura's (1977) Social Cognitive Theory and Fishbein and Ajzan's (2012) Theory of Planned Behaviour; the theoretical assumptions here are of self-efficacy and agency. Bandura (1977) proposed that the 'internal resources' of the individual, such as self-belief, perceived control, and motivation, are important elements that influence their ability to engage in behaviour change. Fishbein and Ajzan (1975) developed this theory further by acknowledging that 'external factors' such as social acceptance of behaviours as the 'norm' and behaviour associated with peer group activity and identity can also have a significant influence on an individual's motivation and ability to engage with behaviour change. Each of these theories recognise that personal investment is required to make a change to behaviour and both internal resources and external factors have a significant impact on the individual's ability and desire to engage with behaviour change. In exploring with first-time mothers their views on what constitutes a safe sleep environment, there may be some reflection on why certain behaviours are difficult to change in spite of being aware of the risk involved. All of the theories and models presented in this section provide a theoretical context for 'Being' and the social construction of reality for the individual that are relevant to this research project and align with its philosophical and theoretical assumptions.

3.4 Epistemology: a way of knowing

The epistemological position of this research is ***Constructionism***. Knowledge is discovered through gathering data from individuals about how they make sense of the interactions they have with the world and other people. Constructionism is divided into two branches, rational and social constructionism; the former is concerned with the individual and their cognitive processes, while the latter incorporates the social interaction between the individual and others. Both aspects here are relevant to my research, in that I want to explore how individuals

make decisions about their behaviour and infant-care practices, but also the influences on their decision-making processes that are likely to come from external sources, for example, family, peer group, health professionals and the media. This epistemology also acknowledges that the nature of the investigation is never value-free. As a researcher I have my own constructed view of the world from my perspective, personally and as a health care worker, and I have a view of my participant's reality, but again from my perspective (Denzin and Lincoln, 2000). As discussed in the previous sections on interpretive phenomenology and hermeneutics (3.2.2 and 3.2.3), Heideggerian and Gadamerian philosophies acknowledge that preconceptions or prejudice cannot be removed from the research activity, because people can only be understood in relation to their world. The researcher and participant bring personal fore-structure to the data collection phase and will construct data during the interview process, from which meaning can be interpreted, by the researcher, during the analysis phase through the application of the hermeneutic process. This collaborative relationship between the researcher and participant allows for new knowledge to be illuminated from the exchange between the researcher and participant, with the aim of achieving a shared horizon of understanding about the particular phenomenon of interest.

3.5 Methodology Selection

Before arriving at Interpretative Phenomenological Analysis as the most appropriate methodology, other approaches were considered.

3.5.1 Grounded Theory

Grounded theory aims to understand social groups by describing the processes associated with a phenomenon and create 'theory' that is grounded in the data (Glaser and Strauss, 1967). Grounded theory is convergent; the researcher starts by exploring general questions then focusing down on more specific issues, refining data using a constant comparative method, looking for the main theme from which to generate a theory. In-depth interviews are refined iteratively over time until a single theme is identified; thus, a theory is generated during the conduct of the research (Charmaz, 2014; Welford, Murphy and Casey, 2012).

There are some similarities with my research aim. I expected to start with a broad, general question and allow the participant to develop their narrative account; however, I expected that my research would generate multiple themes per participant, and I wanted to draw out and interpret what each of these themes meant for the participants, rather than aiming to generate specific theory. I also wanted to investigate whether there were changes in infant-care practices and decision-making over time, and this serial interviewing approach is not consistent with the tenets of grounded theory. Having evaluated grounded theory as an approach, this methodology did not align with my research aims and objectives (Charmaz, 2014; Licqurish and Seibold, 2011; Strauss and Corbin, 1990).

3.5.2 Ethnography

Ethnography was initially considered as an appropriate methodology; with its roots in anthropology and sociology, this approach is concerned with exploring specific social and cultural characteristics, and beliefs and behaviours of a particular social group; but also considers the influence of context and social interaction, and incorporates interpretation to support understanding of the group's culture, beliefs and behaviour (Hammersley & Atkinson, 2007; Lambert, Glacken and McCarron, 2011). Ethnography, or rather micro-ethnography – the study of particular behaviours in particular settings (Wolcott, 1999), appeared to be a reasonable fit with the requirements of my research. However, an ethnographic approach requires prolonged and intensive exposure to the participant group; ideally, the researcher becomes immersed in the world under investigation, and for the participant group to exist as an entity, or cohesive social group, which my participants were not (Hammersley & Atkinson, 2007; Wolcott, 1999). Although this method allows for privileged access to the participant group, and for the collection of rich data, the focus of my research was in gaining an in-depth, idiographic account of what life was like for the young mother. Framing the research questions from the ethnographic perspective altered the focus to the cultural and behavioural aspects of young motherhood at a group or community level, which did not align with the aim and objectives of my research.

3.5.3 Interpretative Phenomenological Analysis

Interpretative Phenomenological Analysis (IPA) is a relatively new methodology. Developed by Jonathan Smith in the 1990s, this methodology aims to 'explore in detail how participants make sense of their personal and social world'; while taking account of the researcher within the research relationship, who then interprets meaning from the individual's narrative account (Smith and Osborne, 2014:53). The theoretical foundations of IPA are drawn from three key philosophies:

- **Phenomenology** - the examination of subjective experience
- **Hermeneutics** - the theory of interpretation, and
- **Idiography** - the study of the 'particular'

Smith introduced the concept of the 'double hermeneutic' in IPA, describing a two-stage process of the 'researcher trying to make sense of the participant trying to make sense of their world' (Smith and Osborne, 2014:53). IPA also allows for flexibility in interpretive stance, depending on the approach of the study, an empathic or questioning (critical) hermeneutic approach can be adopted. IPA traditionally uses a small sample group (to facilitate the idiographic focus and depth of analysis), with the same characteristics or who have shared or similar experience (homogeneous) and gathers in-depth data by a semi or unstructured interview. IPA offers an abductive research strategy; emergent themes are identified from the initial analysis of the participant narrative, then secondary, deeper analysis, using the 'double hermeneutic', aims to discover 'meaning' for the participants within these themes to identify sub and superordinate themes. Each case is examined in detail and interpreted for meaning, before seeking to make connections with other cases across the sample group. A resultant overarching technical account is generated from the themes identified in each idiographic narrative account. IPA also recognises the contribution of the researcher as an important component of the research process, particularly in the double hermeneutic cycle of analysis, where the researcher is interpreting the participant contribution to 'make sense' of the participant 'making sense' of their own experience. It is during the double hermeneutic analysis phase that the

researcher's preconceptions and fore-structures are acknowledged and incorporated to support transparency in the interpretation process. Aspects relevant to the context of the research are also incorporated to strengthen the situational aspect of the technical account and provide context to the individual accounts, for example, researcher observations or relevant comments from family members.

The literature outlines that young mothers are at increased risk of experiencing a sudden unexpected infant death and that they are more likely to adopt infant-care practices that increase the risk for their infants. This research aimed to gain an understanding about the lived experience of young, first-time mothers, and in this context, identify how they make decisions about infant-care practices in general and the infant sleep environment in particular; and identify what influences their decision-making and behaviour. Although output from IPA research is not considered generalisable due to the idiographic nature of the method, it may illuminate issues that are specific to this vulnerable group of mothers that have not previously been captured. As such, findings from this research might provide new knowledge from the unique perspective of the young mother, which may be transferable to similar contexts, and may, therefore, inform future practice and research (Smith, Flowers and Larkin, 2009).

IPA aligns with the philosophical approach and the research aims and objectives and has therefore been selected as the most appropriate methodology to answer the research questions.

3.6 Chapter Summary

This chapter has outlined the philosophical and theoretical foundation for this research project and provided the rationale for the selection of Interpretative Phenomenological Analysis as the most appropriate methodology to answer the research questions. Chapter four describes the design, management, and methods followed during the research process.

CHAPTER 4. METHODS

4.0 Introduction

The literature review identified the relative absence of the ‘voice’ and ‘perspective’ of young mothers when exploring what they understand about reducing the risks to their infant in the sleep environment and how they make decisions regarding identified risk factors. In order to achieve the intended quality and depth of data from the participant’s perspective, IPA has been presented in chapter three as the most appropriate methodology for this research. In this chapter, the methods used to conduct the research, an outline of the relevant processes followed during the design and management of the research, including ethical review, recruitment, data collection, and strategies for data analysis are presented. The chapter concludes with a section reflecting on the challenges of the dual role of ‘clinical professional and researcher’, and the importance of demonstrating an explicit reflexive approach during the research process. To illustrate this reflexive approach, I have included excerpts from my reflective diary which appear in blue text boxes throughout relevant chapters of this thesis.

4.1 Research Aims and Objectives

4.1.1 Aim

To explore young mothers’ understanding of safe sleep and infant-care practices that increase the risk for SIDS, and how they make decisions and apply knowledge of risk factors in the infant sleep environment and care of their infants, who are under six months of age.

Primary Question:

What is the lived experience of young first-time mothers with an infant up to the age of six months? And in that context:

Secondary Questions:

What do mothers understand about what constitutes safe sleep for their infant?

And,

What influences their decision-making around infant care practices related to the sleep environment?

4.1.2 Objectives

1. To elicit interview data at three key stages during the antenatal (third trimester) and postnatal period, up to the infant reaching four months of age
2. Analyse the data using IPA to identify emergent, subordinate and superordinate themes
3. Discuss the key themes identified in the context of the extant literature and current health education strategies for reducing the risks for SIDS.

4.2 Geographical Context

This research is located in the city of Coventry, in the West Midlands region. Coventry is the second largest city in the West Midlands after Birmingham and has a population of 345,385 (Office for National Statistics, 2015). Coventry is comprised of 195 geographical wards or Lower-layer Super Output Areas (LSOAs) that range from relative affluence to significant deprivation. Thirty-six of these LSOAs are in the most deprived 10% in England, representing 18.5% of LSOAs in Coventry as compared to 10% across England overall (DCLG, 2015). Approximately 45% of births in the locality occur in the most deprived quintile of the population. In 2014 there were 4,572 live births in the locality, 209 of those were to young women aged 20 years and below, at a rate of 18.2 per 1,000 women under 20 years of age, which is higher than the UK rate of 15.6 (Office for National Statistics, 2016a). The local NHS Trust employs two specialist teenage pregnancy midwives based at a Children's Centre in one of these most deprived areas, highlighting the need for specialist service provision to this vulnerable group in Coventry. I was able to collaborate with these specialist midwives to facilitate the recruitment of participants for this study.

4.3 Participant Identification & Recruitment

4.3.1 Sample

A purposive recruitment strategy was employed corresponding with the interpretative phenomenological analysis approach (Smith, Flowers and Larkin, 2009:48), to explore a particular phenomenon within an identified population

demonstrating specific attributes; in this case, young white British mothers aged between 16 to 21 years with an identified vulnerability that may increase their risk of experiencing SUDI and SIDS. This population has been identified to carry the highest risk for experiencing SUDI and SIDS in England and Wales (Office for National Statistics, 2016a & 2015; DfE, 2014).

Eligibility Criteria

White British pregnant women for whom this was their first child, were aged 16 (15 years and 12 months) to 21 (21 years and 12 months) years old and presented with at least one of the following factors: smoking; misuse of drugs or alcohol (in excess of 2 units/day in a given week (DH, 2016:6); unemployment or low income; reported housing issues (rented, overcrowding, homelessness/ sofa surfing).

Exclusion Criteria

Pregnant women under the age of 16 (15 years and 12 months) were excluded due to increased complexities with consent, and due to maintaining a homogenous sample, acknowledging that mothers younger than 16 are likely to have different issues to the 16 – 21 age group. Pregnant women older than 21 (21 years and 12 months) years were excluded to achieve a more homogeneous sample group, acknowledging that with increasing maturity, decision-making processes and external influences are likely to change. Women who were not white British, did not speak English, those who were disabled, had an identified learning difficulty, and those with identified mental health issues were also excluded from this study due to the methodological requirement to obtain a homogeneous sample. Fathers were also excluded due to the focus of this study being female caregivers.

Sample Size

Experts in IPA recommend a sample size of between three to six participants or data sets for a student researcher (Smith, Flowers and Larkin, 2009:51). IPA methodology emphasises idiographic focus and depth in exploring the phenomenon of interest. The process of data analysis requires immersion in the data, from transcription to the identification of themes and extracting ‘meaning’ for each participant related to the phenomenon of interest. This process takes ‘time, reflection and dialogue’ (Smith, Flowers and Larkin, 2009:52) to respect and

explore the data and allow the participants to tell their story through my interpretation. To ensure fidelity with the methodology, the target for this research was to collect between three to five complete data sets for analysis (providing between nine to fifteen interview transcripts); however, all data collected was analysed and included. One pilot interview was conducted after obtaining ethical approval.

Identification of Prospective Participants

Through my professional networks, I was aware of a multi-agency partnership group – ‘iBumps’, facilitated by the specialist teenage pregnancy midwives, that aimed to support vulnerable young mothers in Coventry. This group offered a relevant resource to identify prospective participants from the population of interest and potentially offered a more robust strategy for the recruitment of participants from an accepted ‘hard to reach’ group. The group members were already working with these young women, referred to them by the specialist midwives, and in most cases, there was an existing relationship between the service provider and the young woman. Gaining access to this population, especially for longitudinal engagement, required that I employ a reliable route of access to these young women. This group also offered the opportunity to identify a young woman who agreed to test the research materials in a set of pilot interviews.

I attended an iBumps meeting to publicise my research. All stakeholders were supportive of the research and willing to identify and inform potential participants of the study, pass on the printed participant information sheet (Appendix 6), and gain initial verbal consent to enable me to contact them to discuss further participation in the research. It was important to acknowledge that these stakeholders were ‘collaborators’ with the research project and therefore cultivating a good relationship with each was necessary to improve the recruitment potential and ongoing commitment until the recruitment and data collection phases were complete (Ward et al., 2009). However, these collaborators also acted as gatekeepers, and while identifying participants, there may be the potential for screening out suitable participants, either inadvertently or to protect service users; this activity can introduce an element of bias into the project (Ewing

et al., 2004). I attempted to mitigate this activity by keeping in regular contact with stakeholders and clarifying why certain participants were being discounted; there was also the benefit of more than one stakeholder being involved with each participant, thereby offering a number of opportunities for participant identification and referral to the project from more than one service provider. The participant information sheets were distributed to all stakeholders, including a summary of the research and inclusion/ exclusion criteria to facilitate the identification of suitable participants. Electronic copies of the documents provided at the meeting were circulated with the minutes. The same process was repeated with the Coventry Family Nurse Partnership team and groups of health visitors across the more deprived areas of Coventry to facilitate recruitment.

Recruitment and Retention

Recruitment of participants was achieved through referrals from partner agencies involved with the iBumps project and Coventry Family Nurses. This method took several months to establish but improved over time. Young women were recruited consecutively until five had consented to take part.

Participant details were recorded on an initial registration consent form (Appendix 7) that included the participant's personal contact information and details of the expected delivery date, and date of birth once born. Subsequent consent forms (Appendix 8) were completed pertaining to each interview conducted. The interviews were arranged to take place at a mutually convenient time and place for the participant soon after enrolment and subsequently following the birth of their baby.

I intended to pilot the topic guide and interview process with the first volunteer. She was happy to participate in the pilot interviews, and valuable feedback was obtained from the initial interview. Unfortunately, I was not able to contact her to conduct the subsequent interviews despite several attempts. This was a learning experience, as although I had details of her midwife and housing officer, I had not asked for her consent to enable tracing of the participant. Subsequent participants were invited to consent to allow for tracing should they move or change their phone number.

Practicalities of Recruitment

Following on from the positive engagement of stakeholders at the ibumps September 2016 meeting, I was expecting a stream of potential participant referrals. I followed up with e-mails to group members to gently remind them and provided participant information sheets. I focused my contact with one of the specialist midwives and one family nurse, as they had expressed at the meeting, they had a number of service users who matched my recruitment criteria. However, due to capacity pressures and staffing issues within these teams, I expected that identifying participants for the research was not a priority for them (Jessiman, 2013). I also felt that there might have been some 'gate-keeping' elements at play, as when pressing the midwife and family nurse further about the previously identified suitable participants, they retracted, informing me they had not yet identified suitable participants. Gate-keeping can be both positive, in achieving access to hard to reach groups, but also can be a method of professionals protecting their clients from perceived external stress (Jessiman, 2013).

I had no referrals of prospective participants in the three months following the first meeting, despite efforts made to engage the clinical teams. While this was a frustrating phase, the issues I experienced seemed to be commonly experienced by other researcher colleagues and is documented in the literature (Jessiman, 2013). I was also aware that I was trying to recruit in the pre-Christmas period and there were a number of service and staff changes during this time that may have accounted for the low priority my research had for professionals. I attended the second meeting in December and again presented my research.

Several new members were present from partnership agencies that had not attended previously but were in contact with and providing services to young women who had been referred to them by the specialist midwives.

Three young women were identified as meeting the inclusion criteria, and the service providers agreed to approach these young women on my behalf. Following this meeting, I made contact with the three young women who agreed to participate in the research and the first three interviews, including the pilot, were conducted. Also, from this meeting, I extended my network of contacts in the hope

of securing further participants, which was more successful (King and Horrocks, 2010).

Recruitment Period and Research Timetable

The first interview (pilot interview) took place in mid-December 2016, following ethical approval and permissions (section 4.4.3), and the fieldwork timetable was populated with information as each participant was recruited (Appendix 5); the duration of the fieldwork phase was 17 months.

Consent and Capacity

Participant consent was sought at each interview, revisiting issues of confidentiality and commitment to on-going participation. There were no issues regarding the capacity of the participants during the data collection period.

4.4 Ethical Considerations

Issues identified as raising potential concern, such as identifying unsafe sleep practices or environment, child protection concerns, domestic abuse, general and mental health issues, drug or alcohol issues of the parent/s, and the possibility that a parent may experience a SUDI, were considered in detail before submission for ethics approval. Research management issues such as recruitment and retention, consent and capacity, confidentiality, data management, and storage were also considered in detail. This study aimed to explore mothers' decision-making and the factors that influence their decisions; as such mothers might have felt their parenting practice was being questioned or criticised, which may have led to feelings of guilt or failure; or presented a potential area for conflict between the parent and researcher. Fortunately, no such issues arose.

4.4.1 Risk Management

Potential risks to the participant

Intrusion and inconvenience to the participant were the primary considerations for this method of data collection. The participant and their motivation to engage with the subject dictated the length of each interview, which ranged from 21 to 58 minutes duration. All participants were offered a £10.00 high street voucher for each completed interview as compensation for their time. Interviews were

conducted at a location of choice for the participant or their homes to minimise disruption and inconvenience, mainly after the babies were born.

Potential risks to myself as a researcher

Conducting interviews at the home of participants can present a risk to the lone worker; however, I was aware of the relevant lone working protocols and had a monitoring system in place with a colleague. No issues were experienced.

Unsafe sleep practices or environment

I expected to find issues of unsafe infant-care practice related to sleep during this research. From an ethical perspective, and as an experienced professional, I aimed to prompt mothers to discuss and explore their rationale for the decisions they were making, as the purpose of this research was to understand how mothers make these decisions. I have discussed the tension between the ‘professional versus researcher’ roles further in section 4.6.3. Some issues came to light during the interviews, which either prompted discussion around the issue and on two specific occasions, direct advice was provided to the participant. Both issues requiring direct advice arose during the final interviews, and advice was given at the close of the interview after discussion of the issue during the interview was recorded. Following the interview, and with participant’s consent, these issues were reported to the relevant health care professional to enable professional follow-up.

Child Protection and Domestic Abuse issues

There was a possibility that issues of concern may be identified that required escalation to Children’s services. This was made clear in the participant information sheet and was explained during the consent process for each interview. No safeguarding issues arose during the fieldwork phase.

SUDI and SIDS

There was a possibility that any of the participants may experience a SUDI during the research. Fortunately, this did not happen.

4.4.2 Confidentiality and Data Management

A master file was created for each participant (Moule and Goodman, 2014) and contained the initial consent form, participant contact information the signed

consent forms for each interview, the £10 voucher serial numbers a signed participant receipt for each distributed and a hard copy transcript of each interview. These files were stored securely and accessed only by the researcher. The master participant identification (ID) sheet was stored in a separate file and provided a record of the participant and assigned ID number. All other subsequent paperwork and electronic files were coded using the unique participant ID number. Participants were also assigned pseudonyms with the initial ID allocation, generated from the top 20 girls' names in 2016 (Office for National Statistics, 2016b). Production of written material as an output from the research will use these pseudonyms in direct quotations. Each interview was digitally recorded and transcribed by the researcher. Digital recordings were downloaded to a password protected and encrypted computer file and will be deleted following successful completion of this degree. Digital recordings on the Dictaphone were erased following download to the encrypted media file.

4.4.3 Ethical Approval

This research project was granted a favourable opinion by the North of Scotland Research Ethics Service on 17th August 2016 (Appendix 2). Health Research Authority (Appendix 3) and local hospital trust (Appendix 4) permissions were granted in November 2016.

4.5 Data Collection

4.5.1 Serial Depth Interviews

The aim was to achieve three semi-structured in-depth interviews with each participant during the data collection period, commencing between 32 to 37 weeks' gestation and concluding around the 16th postnatal week, encompassing the weeks of highest risk for SIDS to occur.

- Interview 1: between 32 - 37 weeks' gestation
- Interview 2: four weeks after the birth
- Interview 3: sixteen weeks after the birth

Five participants were recruited to the study. Two participants completed all three interviews, two completed two interviews, and the original pilot participant completed one interview, creating a total of eleven data sets that were analysed.

4.5.2 Depth Interview Rationale

Semi-structured interviews, using a topic guide (Appendices 9 - 11) were selected as the most appropriate method of data collection, as I wanted to gather and explore participant views in depth (Doody and Noonan, 2013; Mitchell, 2014; Sandelowski, 2000). Face-to-face interviews also offered the opportunity to observe aspects of the participant's behaviour and the infant sleep environment that provided context to their narratives, such as a smoky environment, a cluttered bedroom, poor housing conditions and the infant sleep space (Doody and Noonan, 2013). There were occasionally inconsistencies between their accounts and my observations of the presenting environment that required further exploration during the interview. These inconsistencies were documented in my reflective diary, and two examples are presented here:

Reflective Diary 13.12.16: Pilot interview, P1

The house smelled strongly of tobacco smoke. P1 stated no one smoked, that the house was just dirty – not up to her standard. This raises the issue of the quality of housing that young pregnant women, and those with a baby, are offered.

Reflective Diary 19.7.17: Interview 3, P3

I instantly noticed the 'soft look' of the cot mattress, decided to wait to the end of the interview to ask about this. P3 stated several times she was aware of what constituted the safe sleep environment. The 'mattress' was an adult feather pillow with a small muslin cloth placed over it as a sheet (presenting potential strangulation risk as not tucked in). Also, the pillow did not fit the cot base = potential for entrapment/ suffocation/ rolling off the pillow. The side drop cot was also not attached to the bed = gap for the infant to fall through & become trapped. Discussion ensued re safety, but P3 did not make the connection with safe sleep recommendations, therefore, after the interview concluded I provided direct advice. I am concerned that the baby had been sleeping in this arrangement for approximately 12 weeks and FNP should have visited during that time. Advised mum and I will contact FNP.

Other advantages of this data collection method lie in its flexibility; the order of the topics can be modified relative to the participant's narrative, explore complex areas, probe for more detail, clarify a participant response, take note of non-verbal communication and what is 'not said' by the participant (Doody and Noonan, 2013; Robson, 2011). This flexibility allows for the exploration of the participant's current knowledge base, probe underlying motives and rationale for certain responses, and encourages the participant to 'reflect on' and make 'sense of' what the subject means to them within their own context (Ritchie et al., 2014; Wagstaff and Williams, 2014), which is the central tenet of IPA (Smith, Flowers and Larkin, 2009). There are, however, potential challenges with the flexibility of this method. One criticism of a non-standard approach is that it introduces inconsistency. Each interview may vary; however, IPA as a qualitative methodology does not aim to find a generalisable or particular 'truth' or 'reality' in a situation, rather the participant's subjective representation of the topic of interest is sought, and as

such, flexibility in data collection is acknowledged as acceptable (Doody & Noonan, 2013; Smith, Flowers and Larkin, 2009).

Interviews have also been acknowledged to encourage the development of rapport between the researcher and participant (Cohen, Manion and Morrison, 2007); this was an important consideration in relation to the retention of participants to engage in future interviews for this project (Ritchie et al., 2014; Smith, Flowers and Larkin, 2009). However, the potential power imbalance that exists between a participant and researcher requires attention, particularly here, where I have a relevant professional background, and the participant represents the client group, or the participant experiences the researcher as authoritarian or unconnected to their life experience. Here, some of the tenets from feminist methodology can be incorporated to minimise the perceived or actual power imbalance. Although this project does not explicitly adopt a feminist methodological perspective, there are elements that are transferable into this research and underpinned in IPA, specifically the focus on supporting and empowering participants to have a voice, to tell their story in their own words, and for the researcher to collaborate with the participant to create new knowledge (Liamputtong, 2007; Renzetti, 1997). This issue has been explored further in section 4.6.3.

The researcher should also be aware when exploring particularly sensitive or potentially socially unacceptable behaviours, that the participant's account may be influenced by current social opinion. An example would be smoking during pregnancy or acting contrary to SIDS risk reduction information, therefore, what the participant says may not be an accurate reflection of their behaviour or activity, for fear of criticism or being judged in some way (Doody and Noonan, 2013). Nayak and Kehily (2014) did not find this to be a particular issue in their research with young mothers, who spoke frankly about their experiences of motherhood; however, their ethnographic approach may have cultivated a more trusting relationship over time with their participants, so methodological approach is important.

Powney and Watts (1987) describe two types of interview: 'respondent' and 'informant'. The respondent interview generates data based on the researcher's

agenda and is usually achieved using a structured or semi-structured format, whereas, the informant interview aims to elicit respondent's views within a particular context from their agenda, which is usually achieved using an unstructured format. This latter approach is consistent with IPA methodology; however, even with a technically unstructured approach, there is a requirement to keep the interview 'on track' to gather data relevant to the research question (Doody and Noonan, 2013; Mitchell, 2014). The literature acknowledges that there has to be some structure to an unstructured interview (Britten, 1995; Holloway and Wheeler, 2010); the level of flexibility in an unstructured approach depends upon how the topic guide is constructed and how the interview is conducted (Doody and Noonan, 2013; Mitchell, 2014). Some tension existed here, as I wanted to remain true to the IPA approach and an informant interview would respect that; however, a pragmatic approach, and particularly as a novice researcher, might suggest I required more structure to guide the interview, but also to ensure I used the time effectively to gather data relevant to the research questions. Doody and Noonan (2013) state that in order to achieve the best results using an unstructured approach, interviewers must possess good communication and facilitation skills to manage the interview process; and that analysing data from the unstructured interview is difficult and time consuming; they suggest this may not be the best approach for novice researchers. Given that an unstructured approach fits best with the methodological philosophy of this project, but considering practical implications as a novice researcher, I decided to adopt a semi-structured, but minimalist approach, with a carefully considered topic guide to facilitate the collection of relevant data (Mitchell, 2014; Smith, Flowers and Larkin, 2009). During the design of the topic guide, however, I did reflect on the dilemma of needing to 'keep participants on track' and the 'fit' with IPA:

Reflective Diary 15.5.16: Reviewing the Topic Guide

If I am trying to keep the conversation focused on the topic guide, am I truly following IPA? Is this not working to my agenda? An unstructured approach aligns with IPA, but will I be able to remain 'hands off' and allow the participants to get off track!! But... this is the point – allowing the participant to take the lead and tell their story. This feels like an important dilemma, whether it is or not will likely be revealed during the interviews.

Other methods of data collection such as a structured questionnaire, telephone/Skype interview or focus group would have been more challenging to achieve the idiographic focus that the individual face-to-face semi-structured interview provided. The face-to-face interviews allowed for the observational aspect, which proved to be an invaluable asset to the narrative data, as I was able to explore some apparent contradictions between the participant account, and my observations of the environment on a number of occasions. I did consider the use of participant diaries, however, given the extended period of focus for the research, I felt this might be an onerous task, especially with a new baby, and did not feel this was a practical option to collect data. The semi-structured interview supported by a topic guide designed to facilitate data relevant to the research questions offered the best data collection method for this study. However, with two participants who were proving difficult to engage for the third face to face interview, I did suggest the option of Skype or recorded telephone interview, one participant agreed, but then was unavailable at several attempts. The second decided to withdraw due to being too busy with her baby to participate.

4.5.3 Topic Guide

A well-designed topic guide (Appendices 9 - 11) or interview schedule provides the basis for interaction with the participant on a given subject to be explored with minimal input from the researcher, to enable the participant to 'tell their story' (Mitchell, 2014; Ritchie et al., 2014; Smith, Flowers and Larkin, 2009). The topic

guide content was derived from the literature presented in chapters one and two and covered four subject areas and a section on participant demographics. Each section comprised of a broad opening question, to facilitate description and context, followed with related prompts and probes to guide discussion and encourage depth in the narrative (Mitchell, 2014). The topic guide was modified slightly between the antenatal and postnatal interviews to incorporate discussion around a reference sleep of the infant, and to accommodate differences between antenatal intentions and postnatal actions.

4.5.4 Pilot Interview

An important step in the interview process was to 'test' the topic guide and proposed interview materials to ensure ease of administration for participants and that the proposed materials achieve relevant data collection (Smith, Flowers and Larkin, 2009). The topic guide and prompt materials were reviewed by my supervisors, specialist, and research midwives, and were submitted with the ethics application; however, the materials also benefit from being piloted with the intended participant group. The topic guide and materials were piloted in an interview with a 17-year-old, pregnant service user recruited via the iBumps meeting in December 2016. The interview was digitally recorded, and notes were written up in my fieldwork and reflective diary immediately after the interview. Following the pilot interview, the participant was asked about the pre-interview information and the recruitment process, the general feel, and flow of the interview, her feelings about having the interview recorded, my note taking during the interview, and whether she thought the questions were easy to understand and relevant to her. The participant was complimentary about the recruitment and interview process, my approach, and thought the subject was important. She thought the questions were relevant and easy to understand and could not suggest anything else to include. On reflection, due to a perceived power imbalance, the pilot participant may not have felt able to critique her experience of being recruited and interviewed, although I had intended to facilitate an open and appreciative exchange of ideas.

I transcribed the interview and listened to the recording several times to appraise my interview technique (Doody and Noonan, 2013). The most notable issue was the amount I spoke during the interview, and whenever there was a pause, I would rephrase the question or prompt. I realised that I needed to acknowledge that pauses were acceptable to allow the participant time to think, reflect and compose an answer. Often the participant asked a question in return, which I then answered. I was aware that this was happening during the interview but was not aware of the extent to which this occurred until I listened back to the recording. I also noted that my personal opinions and beliefs, and possibly my agenda to pursue certain lines of inquiry, had an impact on how I explored some answers further while accepting others at face value. I also considered whether I might be actively leading the participant through the interview by adhering to my topic guide too rigidly and asking too many questions (Smith, Flowers and Larkin, 2009). I reflected on this and the challenges previously identified by Doody and Noonan (2013) of trying to conduct a relatively unstructured interview as a novice researcher; although I considered that my topic guide was semi-structured, I had intended a more minimal questioning approach, more aligned with an unstructured approach. I was also acutely aware of my own 'professional versus researcher' tensions, I had introduced myself to the participant outlining my professional background. I felt that this introduction altered the participant-researcher relationship immediately; this entry in my reflective diary highlights this issue:

Reflective Diary 13.12.16: Pilot interview P1

'This interview felt like I was the health visitor visiting a client! I struggled to keep the researcher-professional boundary in place and seemed to be focusing on this too much. Listening back to the recording, I am giving information on a number of topics, but these are in response to questions from the participant. Perhaps introducing myself with a health visitor background was not helpful'.

Following a review of the pilot interview, several issues were identified that required some modification to my approach with my interview technique, and to maintain the focus on the idiographic account. These issues, and how to resolve them were discussed with my supervisors. I decided that I would introduce myself as a health researcher, rather than share my professional background with participants, with the intention of removing any client-professional relationship connotations that may arise. This seemed to work better for subsequent interviews and allowed me to assume the role of the researcher.

I also decided to retain the minimalist semi-structured approach but, be more self-aware about how I conducted the interview; allowing for long pauses, asking succinct, clear questions and not being tempted to rephrase questions. No modifications were made to the content of the topic guide; however, the topic sections were written out on separate cards for ease of use when covering the topics in a different order. I also aimed to complete the demographic section at the end of the interview so as not to lead with the specifics of participant smoking or alcohol use for example, instead, facilitating these topics to arise spontaneously during the interview to support the idiographic account.

4.5.5 Conducting the Interviews

Before each interview, a telephone or text conversation occurred to ascertain interest in participating or continuing with participation in the research. A convenient time and venue were arranged to conduct the interview, with interviews usually conducted at the participant's home, and for the second and third interviews, their babies were present.

On arrival, following introductions, the paperwork aspect was completed; checking that participants for the first interviews had read and understood the participant information sheet, any questions were answered, the consent forms were completed, and I provided an overview of the interview process to be followed and an approximate duration of the interview. Once participants were comfortable to continue, the recording equipment was set up, and the interview commenced.

The Interview Interaction

There is a debate between the qualitative traditions about the different perspectives on interviewing and the interviewer's role in generating data. One of the main debates is whether the phenomenon or knowledge is pre-existing (akin to a positivist paradigm) and is 'discovered' during the interview process, or that knowledge is 'constructed' (constructivist approach), the interviewer and interviewee collaborating to construct new knowledge during the interview process (Kvale and Brinkmann, 2009). The notion that knowledge is created within an interview has raised concern regarding the reliability and validity of these data external to the specific interview event. Post-modernists however, refute the notion that there is an individual 'self' that can be interviewed, suggesting that any interview can only provide a snapshot of the experience and interpretations of the individual at a given time, but that these data can be 'meaningful beyond the immediate context' in creating some understanding of the phenomenon for others (Ritchie et al., 2014:180). The philosophical underpinnings of this research are based in the constructivist/ interpretivist paradigm; therefore, the interview process viewed as creating knowledge through collaboration between the interviewer and interviewee is appropriate. However, it can be argued that some specific knowledge already exists, in that participants have existing beliefs (their construction) about certain behaviours and have been exposed to external social constructions regarding these behaviours such as smoking in pregnancy. Also, participants may have received information from professionals regarding behaviour modification and the infant sleep environment. The construction of new knowledge during the interview process in this project was, therefore, centred on how participants' existing knowledge was translated and applied to infant-care practice, and what influenced the decisions relating to this activity.

The other important aspect of the interview interaction concerns the relationship between the interviewer and interviewee. The feminist perspective is reflexive, interactive and non-hierarchical. The interviewer shares personal experiences linked to the research topic to achieve a reciprocal relationship with the interviewee. At the other end of the spectrum, the interviewer endeavours to remain neutral and to gather data 'from a distance' to the interviewee to minimise

bias that may impact on reliability or validity of the data. This approach perpetuates the power imbalance between the interviewer and interviewee. Rubin and Rubin (2013) described the mid-ground as 'responsive interviewing'; emphasising the building of a trusting and reciprocal relationship between the interviewer and interviewee that fosters an improved quality of exchange during the interview process. I aimed to adopt this latter method of interaction during my interviews.

The interview consisted of four broad 'opening' questions supported by a list of related topics of interest to be explored, that were used to probe and prompt. The interview pack included a number of cartoon cards depicting unsafe sleep environments and risky parental behaviours (Appendix 12) to be used as prompts should this be necessary to facilitate conversation; however, these visual aids were never used during any of the interviews (Mitchell, 2014). The participant generally controlled the interview direction and content following on from the opening question. The participant largely dictated the order of topics, and as topics were covered, the topic card was put to one side. Minimal notes were taken during the interview process so as not to interfere with the flow of conversation. Any notes that were made were to highlight a comment to return to, to probe further or to note anything of significance. The participant was made aware that some notes would be taken during the interview; however, these would be minimal due to the digital recording. Once the interview topics were covered, a 'rounding up' question was asked to cover anything else the participant wished to include, followed by the demographic questions. A final opportunity was given to add anything else to the interview, then I terminated the interview and stopped the recording. The participant was thanked and given a gift voucher for her time, and arrangements for subsequent contact for the next interview were made. I also made notes in my fieldwork and reflective diary immediately after leaving each interview.

4.6 Researcher Involvement

Qualitative research methodologies acknowledge that the researcher is part of the research world and as such, are actively involved with generating and interpreting

data. Their subjective stance is declared and acknowledged within the research process and can be illustrated through the use of a reflective diary (Darawsheh, 2014; Houghton et al., 2013; Moule & Goodman, 2014).

4.6.1 Reflexivity

Reflexivity refers to the active and continuous process of examining oneself in the role as researcher and the impact this has on the research relationship and context of the research (Anderson 2008; Hughes, 2014). This process requires that the researcher is self-aware, and takes note of characteristics such as gender, age, personal beliefs, professional role and motivation for conducting the research. Acknowledgement of how these characteristics might influence the research process, data analysis and interpretation of findings are required for transparency in qualitative research. Use of a reflective diary during the qualitative research process formalises this requirement and offers both a valuable resource for the researcher and provides a visible audit trail of the research process (Houghton et al., 2013). Throughout the thesis, personal reflections are included at relevant points and are highlighted in blue text boxes.

4.6.2 Reflective Diary

The reflective diary has a number of functions and should be used during the entire research process, from initial thoughts about selecting an appropriate methodology, through design and management of the fieldwork phase and during analysis of the data. The primary function of the reflective diary, if maintained well, can support the development and execution of the research project, ensuring fidelity with the chosen methodology and alignment to the research questions and aims. The reflective diary, as a tool, can support the personal development of the researcher allowing for reflection on their role, skills, beliefs, and motivations, and highlighting any personal prejudice. All of these characteristics have an impact on all stages of the research; it is, therefore, beneficial for the researcher to be aware of these issues in conducting qualitative research (Clancy, 2013; Clarke, 2009; Moule & Goodman, 2014). The diary can also document personal dilemmas and how these are resolved throughout the research, demonstrating the developmental progress of the researcher. The diary also acts as an aide-memoire,

supporting the recall of relevant facts related to the conduct of interviews, notes on the environment, significant elements about participant responses and any additional information the researcher thinks relevant to include. Referring back to the diary during transcription and the analysis phase can add nuance to aspects of the interview which otherwise might remain hidden (Clarke, 2009). Overall, good use of a reflective diary provides a narrative of the research process and the considerations of the researcher during the process. This documentary evidence enhances the rigour of the research process, makes the stance of the researcher visible, supports trustworthiness and transparency, and presents the decision-trail of how conclusions have been drawn (Darasheh, 2014; Jasper, 2005).

4.6.3 Professional as Researcher

A key ethical concern and potentially, methodological problem, exist where there are tensions between working as a researcher and a professional in the field of investigation. This was a real dilemma to negotiate while addressing the ethical considerations for this project and managing the tension of this dual identity is discussed in the literature (Clarke, 2009; Houghton et al., 2013). During early deliberations, I knew I would be unable to leave the participant who persisted in promoting an unsafe sleep environment for their infant, and my instinct would be to provide them with more directive advice. This tension was explored in some depth during the ethics application stage and while considering an appropriate research methodology for this project. I was aware that in order to achieve the intended idiographic focus during data collection I needed to allow the participant to give their account. This research aimed to understand participant behaviour, decision-making process, and rationale; I was satisfied that I would be able to explore issues of concern in some depth and potentially participants could arrive at a safe conclusion themselves. However, I did expect to find instances of unsafe infant-care practice and parental behaviour. Where concerns were assessed to be high, then a conversation would ensue with the participant, my supervisors, and their relevant health professional, depending upon the circumstances. This was documented on the participant information sheet and was expressed verbally while obtaining consent for each interview. One issue was identified as a

particularly unsafe sleep environment during a third (final) interview. The issue was raised and discussed with the participant towards the end of the interview, appropriate advice was provided, and I gained consent to share that information with the participant's health professional. As this was a final interview, the issue of providing advice on the identified risk would not impact on future interview data; however, this did raise the issue of how I might deal with this again if a similar situation presented at an earlier interview.

Maintenance of a reflective diary during the research project supported continuous acknowledgement of any dual-role tensions that arose during the data collection and analysis phases. Entries in the diary provided the basis for personal reflection and facilitated the identification of my professional and personal perspectives from those of the participant's. This approach facilitates transparency in the interpretation of the participant's narrative account. In this way, IPA methodology allows for acknowledgement of the researcher perspective but ensures that the voice of the participant is represented in the analysis and resulting technical account (Smith, Flowers and Larkin, 2009).

4.7 Chapter Summary

This chapter has reviewed the methods used to conduct the research and relevant processes that were followed during the design and management of the research; including ethical review, recruitment, and data collection, ensuring all processes were underpinned by IPA philosophy. The next chapter describes the data analysis process, presents the key findings, and introduces the participants.

CHAPTER 5. DATA ANALYSIS

5.0 Introduction

This chapter outlines the analysis process that was conducted with the data. Examples from one of the participant's case studies are presented to illustrate the application of hermeneutic principles and development of emergent and subordinate themes, through to the distillation of the superordinate themes for all participants. Issues of quality and validity of the researcher's interpretation and presentation of this technical account have been considered, and the chapter concludes with an introduction to the research participants, in the form of 'pen portraits', to provide context for the subsequent findings chapters.

5.1 Data Analysis Process

IPA methodology aims to explore participants' views and understand how they make sense of the phenomenon of interest. The researcher then interprets the meaning participants ascribe to the phenomenon, to provide a technical account of the phenomenon to enhance wider understanding (Dibley, 2011). The key principal of IPA is the idiographic narrative; to ensure that this remains central to the interpretation, direct quotes are used to illustrate the emergent, sub and superordinate themes (Larkin, Watts and Clifton, 2006; Pringle et al., 2011; Wagstaff and Williams, 2014). To move from the participant's idiographic account through interpretation to the researcher's technical account requires that data be subject to a number of rigorous stages during the analysis process. These stages are described in detail in Table 5.1 and follow the steps of analysis prescribed by Smith, Flowers and Larkin (2009). Adding to the complexity of the analysis was the longitudinal aspect of data collection; this was factored into the analysis strategy to allow for sufficient focus on each participant, and each time point, before moving to analysing data across all participants (Spiers, Smith and Drage, 2015; Thomson, Martin and Sharples, 2015). Initially, each interview was treated as a discrete case study, ensuring that each interview was fully analysed before moving to the next. This approach was used to preserve the idiographic focus of the

analysis phase, and to prevent ‘cross contamination’ of themes from one interview to another, and between participants.

Table 5.1: Steps of Analysis (Summarised from Smith, Flowers and Larkin, 2009)

1	Reading and re-reading	Line by line reading & listen to the recorded interviews	
2	Initial noting	Descriptive comments Linguistic comments Conceptual comments Deconstruction	Capture content Use of language Questioning Read sentence backwards
3	Developing Emergent Themes	Identify & label Link back to text; identify relevant quotes	
4	Searching for connections across emergent themes	Abstraction Polarisation Contextualisation Function Bringing it together	Group similar themes Oppositional relationships Context of emergent themes Specific function of themes Summary table, mind map, file created for each emergent theme
5	Moving to the next case	Repeat steps 1 – 4 for each interview transcription for each case	
6	Looking for patterns across cases	Create a summary table of themes – super & subordinate	

5.1.1 Transcription as part of the Analysis Process

Recorded interviews were transcribed verbatim soon after each interview was completed to facilitate researcher recall and engagement with the data (Biggerstaff & Thompson, 2008; Smith, Flowers and Larkin, 2009). Transcriptions were created in a tabular MS Word document; password protected and assigned a participant identification number (ID) and a pseudonym. Colour coded text identified pauses, laughter or other noteworthy behaviours. Any specific points of interest or observations regarding the participant, the interview, the relationship between the participant and myself, or my reflections were noted on the

transcript after printing (sourced from the fieldwork notes and reflective diary), and as such, enhanced the analysis of each transcription (Yardley, 2000). A brief pen portrait of each participant's circumstances was created following the first interview and updated with relevant information at subsequent interviews.

IPA requires the researcher to become immersed in the data; the researcher is therefore encouraged to carry out their own transcription, and this technically represents the first stage of data analysis (Wagstaff & Williams, 2014). The act of transcribing provided the opportunity for 're-living' the interview and allowed me to become more familiar with the data, actively listening to the participant in a way that was different to listening during the interview. I can liken this to the difference between driving a familiar route in a car as a driver and experiencing it differently, as a passenger. However, it was a challenge to remain focused on the transcription and not be tempted to start to identify themes or start to apply interpretation at this stage. I learned the value of 'staying in the moment' during the transcription and just hearing and typing supported a deeper familiarisation with the data.

5.1.2 Software

The conventional approach to data analysis in IPA appears to favour a 'pen and paper' approach (Smith, Flowers and Larkin, 2009). However, there is considerable flexibility, and the literature reports a number of alternative approaches including the use of relevant data analysis software packages such as QSR NVivo. While there are both advantages and disadvantages to using data analysis software, the literature supports that any decision is based on researcher experience, familiarity with using relevant software and researcher preference (Wagstaff et al., 2014). My preference was to work with hard copy transcripts, post-it notes, highlighter pens and flip charts as illustrated in the following section, to facilitate active engagement and immersion in the data.

5.2 Idiographic Approach - Case Study

An idiographic approach, examination of the particular, is fundamental to IPA. This requirement to explore and reveal the 'uniqueness' of each case was described in chapter four. Achieving a real sense of who the participant is and working closely

with their narrative is critical to maintaining the participant voice through the researcher's interpretation and presentation of the technical account.

5.2.1 Identification of emergent themes

This section illustrates the data analysis process using worked examples from Evie's case file. Using a hard copy of the transcript, initial noting was captured under three sections: description/ content, language, and interrogation (Fig. 5.1). During the transcript notation phase, expressions of note, either in language used, or a specific or notable comment, reference to an issue or idea, or an interesting piece of narrative that generated a question, or was of interest, were recorded on coloured 'post it' notes and stuck to the office wall (Fig. 5.2a). As this phase continued, 'post its' were added, either to an existing cluster, or started a new cluster.

Once the initial noting of the transcript was complete, the resultant 'post it' clusters were transferred to a flip chart and photographed (Fig. 5.2b). The flip chart clusters and annotated transcript were then reviewed one or two days later, to appraise the clusters to ensure they remained consistent with the original placement or were revised into other clusters. Some clusters were amalgamated or subsumed, and some were separated to create new clusters. This process revealed possible emergent theme groupings (Fig. 5.2b) which were then recorded in a table. This process was captured onto a 'concept sheet' for each interview (Fig. 5.3) and the emergent themes were recorded in the left-hand column.

Evidence of this process was presented at regular supervisory meetings for discussion of the emerging themes in relation to the participant narrative during the analysis phase. The resultant flip charts and concept sheets were presented at an extended audit review meeting with two supervisors towards the conclusion of the analysis phase.

During this phase of identifying emergent themes, as a novice researcher using IPA, I was concerned that *my* emergent themes might not be grounded in the participant narrative. This excerpt from my reflective diary demonstrates my initial misgivings when considering whether themes were extracted from the data or were the subject of researcher formulation.

Reflective Diary: 7.2.18

I have a lot of emergent themes. They seem to be 'emerging' relatively easily (?? Too easily). There are good quotes to support them, but I am a bit concerned that they are emerging because I am looking for themes related to my RQ.

Reflective Diary: 21.2.18

I now feel reassured that the themes are there AND derived from the data - just had audit feedback from a colleague and we have a high similarity match of themes identified.

The interrogation section comprised my comments, questions, and reflections about the participant narrative. Notes from the interrogative section were transferred to a 'concept sheet', and this document provided the basis for my 'interpretation' of the participant narrative (Fig. 5.3).

Figure 5.1: Step 2 – Initial noting on the transcript

	Mia's Data I/V 2: P 003 24.25 mins	Description/ Content	Language use	Interrogative
1	What's it like being a mum?			
2	It's great, I love it. Like, you get little things, like where he smiles you get to see him growing up. Like this morning I think he's so big compared to other babies, like he's still small but like, obviously it's still hard, cos you've got to do everything for him.	Contrast of being a mum. Growth + development Comparison Dependent - hard work	Great Love it Describes positives Balances 'hard work'	Positive experience but 'hard work' because baby dependent on her. Enjoyment
3	And how has your life changed?			
4	Like, I used to go out like, literally every day and then, now I've had him, I get out like three times a week... if that. And what do you do when you go out? Like, I go to shop, take him out for a walk, go to my friend's house so she can see him, mmm... that's it really.	Social life changed Difficult to get out	Comparison of pre baby life Different 'going out' Reduced frequency Hesitates	Adaptation - change Impact of baby - getting out but difficult Mentioned 1st time a priority change?

Figure 5.2a: Step 3 - Noting emergent themes per transcript



Figure 5.2b: Emergent themes organised on to flip chart



Figure 5.3: Concept sheet

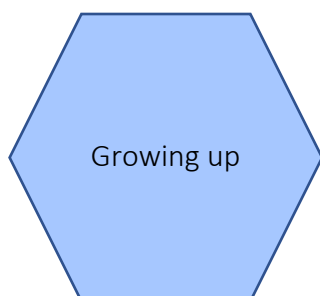
Emergent Theme	Interpretation	Quote
	Only 19 but puts distance between 'youth' and 'now pregnant' Smoked when 'young' but ' not really ' since pregnant – conflict - ? suggests still smoking? But fear of being judged/ or only recently quit = still close to her 'younger days' & Doesn't mention not liking smoking	P2 L6
	Easy to change behaviour you don't enjoy – drinking	P3 L6
	Doesn't like weight gain – result of change to diet & pregnancy. Implications for health – had to leave work. Not her decision – gravity of risk emphasised, 'all doctors' 'dangerous' - ? transfer of responsibility	P2 L4 P3 L8
	Issue: *Definite mind/ reality disconnect	P19 L78
	Living at home: 'all the help' 'mum will help' had 4 children (Evie youngest – ?'babied' & still wants to be the baby herself) – viewed as trusted expert.	P3 L12
	Family home = nice area, expensive, safe, quiet, familiar. Evie couldn't afford to live in this area = reluctance to grow up & seek independence??	P3 L12

The following is an example of a short section from Evie's first interview concept sheet, illustrating my interpretation based on Evie's narrative and the identification of an emergent theme.

Figure 5.4: Worked Example

What does it mean to Evie to be pregnant?

I think it will be a bit different for me and you (mum) not to have any time, I think I will get time without the baby but apart from that I don't do anything so I don't think it will be any different, just be the same but with a baby, except probably not getting as much time to yourself ... 'cos like before I got pregnant I'd spend like an hour and a half doing my hair and make-up ..., so that might be different 'cos I was a bit obsessed with stuff like that. (P14 L58)

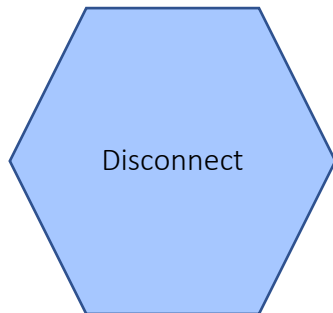


Priorities may be different, although seems unsure, she thinks it will be different, but then she doesn't think it will be different; but her priorities are already changing from her obsession with hair & make-up, to realising that she won't have much time to for that after the baby arrives. There is an expectation that there will be change demonstrated by her evaluation of how she will not be able to allocate as much time to do the things she does now. Her priorities are evolving from adolescent focus to prospective motherhood.

Yes, everyone's so excited. Even though it was a huge shock at the beginning, they have been so supportive. It was a huge shock, it just sort of came out of nowhere, but I did have to tell my mum and then she told my dad even though I told her not to, but she said I needed the support, so after a while I tried not to get annoyed. They were very supportive, at the start I was like this is going to ruin my life, then my mum sat me down and she was like it doesn't need to ruin your life. You can still go to uni, ...so she sat us both down, he wants to go into the Marines, and said you can still do that, this won't stop you, and they were like so supportive.

And we've been together 3 years, so it is quite a long time but I thought, we were scared it would ruin the relationship but if anything it has made us better before we were like arguing about everything but this has sort of matured us a bit, there's more important person to think about now, definitely matured us both and made us more excited for everything else to happen, which is nice. (P17 L74)

Evie reflects here on the impact of discovering she was pregnant, this was a negative experience for her - *life ruined, shock, unplanned, fear* of telling her father. She talks of how the pregnancy '*came out of nowhere*' – she is not seeming to take responsibility for her actions that have led to this pregnancy. Feelings possibly related to her uncontrolled diabetes, and possible guilt for the increased monitoring that has come with the pregnancy and awareness of the increased risks to the baby.



Having decided to continue with the pregnancy, Evie told her mum but was particularly anxious about telling her dad. Was Evie worried about his disappointment, disapproval? She was also concerned about the impact on her relationship with the baby's father – '*scared it would ruin the relationship*'.

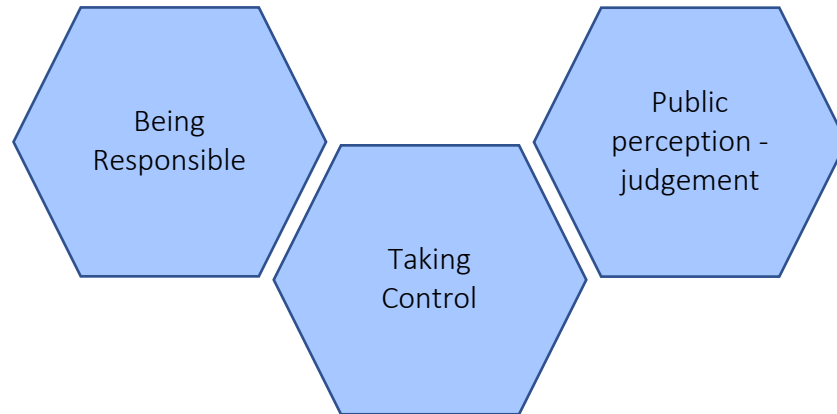
In confiding in her mother, Evie has sought out support, and her mother has reassured both Evie and her partner that there is a future life for them. They can still be aspirational for future – '*it doesn't need to ruin your life. You can still go to uni*' and '*you can still do that, this won't stop you*'.

Has being pregnant influenced you to change anything?

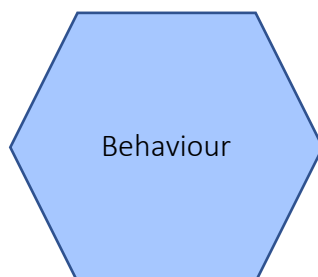
Not really, I mean I was quite ill anyway, I'm type 1 diabetic, so I had to get that really under control, so that was a change, but that was a good change anyway so that was fine, apart from that I haven't changed anything, to be honest I was really quite healthy before so I haven't really changed a lot, I guess I'm quite normal, just, I'm obviously, it's been different, 'cos I used to be really skinny and now I'm carrying all this weight, so it has been quite hard, its put a lot of pressure on my kidneys as well, so I've not been able to do a lot, I haven't had to change much, which is good. (P2 L4)

There is a lot of contradiction here, or perhaps minimisation of her health issues and the impact of her lack of compliance and resultant uncontrolled diabetes on the pregnancy and development of the baby. Evie's serious health issues were revealed to me when she was identified as a prospective participant, however Evie has not really mentioned these serious health issues as yet (1st interview). Her to-ing and fro-ing between '*quite ill*' and '*really healthy before*' is interesting. She is telling me that she has a serious health issue, but she minimises the changes she has made since being pregnant. Her health issues were significant enough that she considered terminating the pregnancy. Evie appears to want to create 'distance' between the pre-pregnant self and who she is presenting now. Why? – is she perhaps presenting the 'grown up' version of herself, presenting an acceptable 'front' of mum to be, and modification of her behaviour has been a necessity, pregnancy is not about her and her rebellion anymore. Perhaps Evie now has permission to grow up and leave her rebellious teen years behind her? Has she become bored of rebelling now she is 19 and pregnancy has given her the 'opportunity' to grow up? Also, being 'normal' seems important to her.

Perhaps her non-compliance with diabetic management was about being 'normal' and now she wants to be a 'normal mum'. Is Evie using pregnancy as a catalyst for positive change? – growing up, taking control of her life, a new start – offers opportunity to move away from rebellious teen life > adult.



I smoked when I was younger quite a lot, but not really since I was pregnant. I don't really like drinking either, so I don't feel... I haven't missed out on anything as I didn't really enjoy any of it. (P2 L6)



Evie puts distance between her 'youth' and her pregnant self, but she is still close to her 'younger days'. Evie admits she smoked when 'young' but '**not really** since pregnant', this suggests she may still be smoking? But fear of being judged/ or only recently quit. Evie states she doesn't really enjoy these activities, but Evie was referred to the study on the basis of her ongoing behaviour which included smoking and drinking.

Step 4 comprised of reviewing the transcripts, notations, the flip chart themes, and the 'concept sheet'; working back and forth between these documents to identify connections, patterns and any notable 'pearls' (Smith, 2011). This process did indeed feel cyclical, in keeping with hermeneutic principles of interpretation. During this phase themes were grouped (these later emerged as subordinate headings); groups were expanded, separated, reduced or subsumed until logical groupings emerged which appeared intuitively to organise into subordinate themes. These final groups of themes were captured on a themes chart (Figure 5.5) and tabulated (Table 5.2).

[illegible]

Table 5.2: Emergent themes summary for Evie

Emergent Themes	Sub-ordinate themes
Changing priorities Taking responsibility Making decisions Wanting help/ mum vs independence 'maturing' relative to peers Change Disconnect from reality	Growing up (teen brain)
Making decisions Being undermined Challenging outdated advice	Taking control
The work of motherhood Public perception Aspiration for a better life Decision how to feed	Becoming a mum
Family Partner Peers	Changing relationships
Position in family Need for recognition/ validation as a mother Knowledge	Status/ purpose
Information is power – wanted A/N info 'clear message' supports infant-care practice/ recall	Information – receptive
Overwhelming Overload Burdensome Irrelevant Rationale not explained Information giving experienced as 'telling'	Information – Irrelevant? Rejected?
Easy – physical care Convenience Developmental incongruence Fear of 'spoiling' child <ul style="list-style-type: none"> • Self-soothe • Sleep through as goal Comfort Out of Moses basket risk Preserve sleep at all cost 'Luck'	Infant care Sleep

The final phase of the case study was to write up a summary of the findings for the participant. This provided an individual pen portrait of the participant and allowed

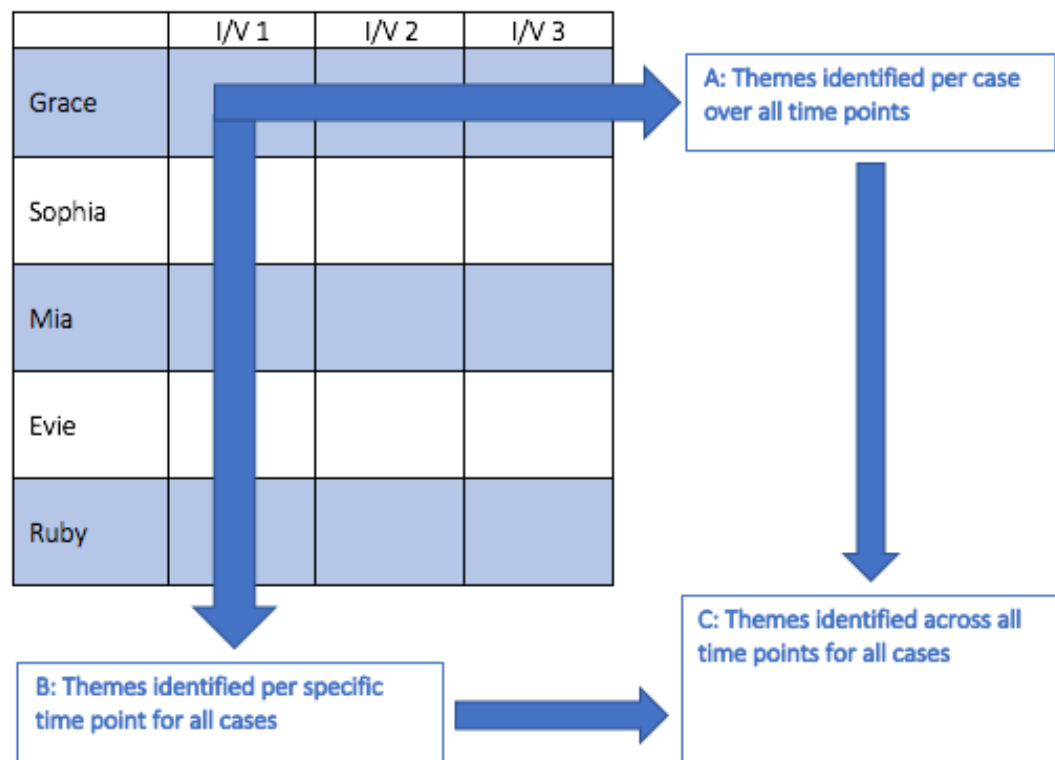
for the individual characteristics of each participant to remain prominent when analysis moved to identify themes across all participants, and subsequent write up of the findings chapters.

In treating each interview as a discrete case study before moving to analyse the next, this allowed for themes to be identified and treated within the context from which they emerged, before looking for links, patterns, convergence and divergence across themes for all time points for the participant.

5.2.3 Group data analysis

Participant ‘case studies’ were completed following the process outlined above for all interviews. A repeat of *Step 4* with summary data for each participant was a complicated process and comprised of combining notes from the transcripts and reviewing the flip charts to understand the connections and differences between the participants, and simultaneously understanding the connections and differences across the interview time points. This was a particularly challenging task due to the serial interview approach, resulting in the analysis being conducted in two dimensions as per figure 5.6.

Figure 5.6: Analysis of Themes Grid



EM THEMES ①

- WEEK DECISION
- NEED TO GROW UP
- QUICK
- THREE CONTROL
- CHAOTIC MESSY
- FEEL FRIENDSHIP CHANGES
- FEEL TOWN
- SOCIAL LIFE
- CHARGE SCHOOL
- STOP WORK

IN ② 4 WEEKS

- 'TWO LIVES'
- DIFFERENT FROM MOTHERS
- SOCIAL LIFE SOME!
- NOT GOING OUT
- 'JOB' OF BEING A MUM
- CONSTRUCTIVE MOTHERING
- SEEKING HELP AS UNHAPPINESS
- NOTICE AS EXPECT
- ROUTINE AS CONVENIENCE
- ROUTINE AS POKING
- WANTS GAMES OUT 'AS MUM' & 'AS THEM'
- THINKING
- REJECTION
- NEED RULES
- YOU'RE NOT UNHAPPY
- YOUR CONFIDENCE
- PLEASE THEM!

IN ③ 16 WEEKS

- LOVE OF 'MUM' LIFE
- SHOCKING
- DRINKING
- NEED TO REINVENT YOUR IDENTITY
- BODY IMAGE
- LTC HEALTH ISSUES
- WOMANHOOD
- NO 'MUM' TIME'
- WEIGHING AS ADULT
- WEIGHING AS MOTHER
- CHOSEN ONE
- NO OFFER
- AS EXPECT OF MUM
- THIS IS MY JOB
- NO ONE ELSE CAN DO THIS
- HOT GOING OUT
- WILD NOISE
- GOING OUT
- DISORDER

EM THEMES ① (continued)

- FOCUS ON TIME
- SURE!
- BEAUTY VS FANTASY (MUM)
- ALONE
- HUSK
- CONTROL OWN PLAY
- SHOCK
- 'HAVE TO GROW UP
- 'LITTLE MUM'
- FINANCES
- NON-ISSUE
- BE RESPONSIBLE
- ROUTINE AS CONVENIENCE
- ROUTINE AS POKING
- WANTS GAMES OUT 'AS MUM' & 'AS THEM'
- THINKING
- REJECTION
- NEED RULES
- YOU'RE NOT UNHAPPY
- YOUR CONFIDENCE
- PLEASE THEM!

IN ② 4 WEEKS (continued)

- ARTICLES
- NO CONTACT AT ALL
- SHOULD NOT PERSONAL THIS
- NAME
- OLD FRIENDS
- ADULTS
- SHOULD NOT PERSONAL THIS
- NAME
- OLD FRIENDS
- ADULTS

IN ③ 16 WEEKS (continued)

- NAME
- OLD FRIENDS
- ADULTS
- SHOULD NOT PERSONAL THIS
- NAME
- OLD FRIENDS
- ADULTS

EM THEMES ① (continued)

- EMPHASIS
- INFO = CONTROL
- OVER-LOAD
- NOT
- RECOGNITION
- 'MUM'
- AM I DOING THIS
- WOMANHOOD
- FACE OF BEHAVIOUR
- SWITCH OFF!

IN ② 4 WEEKS (continued)

- GOOD ENOUGH
- PROF. TALKING
- VERBAL BEST
- SAFE SLEEP
- RECALL
- RECOGNITION
- OVER-LOAD
- 'TELLING'
- LITTLE UNUSUAL ENTITLED

IN ③ 16 WEEKS (continued)

- WELLS
- GOOD
- INFO AS
- EMPHASIS
- OVER-LOAD
- NOT
- RECOGNITION
- 'MUM'
- AM I DOING THIS
- WOMANHOOD
- FACE OF BEHAVIOUR
- SWITCH OFF!

EM THEMES ① (continued)

- EMPHASIS
- INFO = CONTROL
- OVER-LOAD
- NOT
- RECOGNITION
- 'MUM'
- AM I DOING THIS
- WOMANHOOD
- FACE OF BEHAVIOUR
- SWITCH OFF!

IN ② 4 WEEKS (continued)

- GOOD ENOUGH
- PROF. TALKING
- VERBAL BEST
- SAFE SLEEP
- RECALL
- RECOGNITION
- OVER-LOAD
- 'TELLING'
- LITTLE UNUSUAL ENTITLED

IN ③ 16 WEEKS (continued)

- WELLS
- GOOD
- INFO AS
- EMPHASIS
- OVER-LOAD
- NOT
- RECOGNITION
- 'MUM'
- AM I DOING THIS
- WOMANHOOD
- FACE OF BEHAVIOUR
- SWITCH OFF!

EM THEMES ① (continued)

- EMPHASIS
- INFO = CONTROL
- OVER-LOAD
- NOT
- RECOGNITION
- 'MUM'
- AM I DOING THIS
- WOMANHOOD
- FACE OF BEHAVIOUR
- SWITCH OFF!

IN ② 4 WEEKS (continued)

- GOOD ENOUGH
- PROF. TALKING
- VERBAL BEST
- SAFE SLEEP
- RECALL
- RECOGNITION
- OVER-LOAD
- 'TELLING'
- LITTLE UNUSUAL ENTITLED

IN ③ 16 WEEKS (continued)

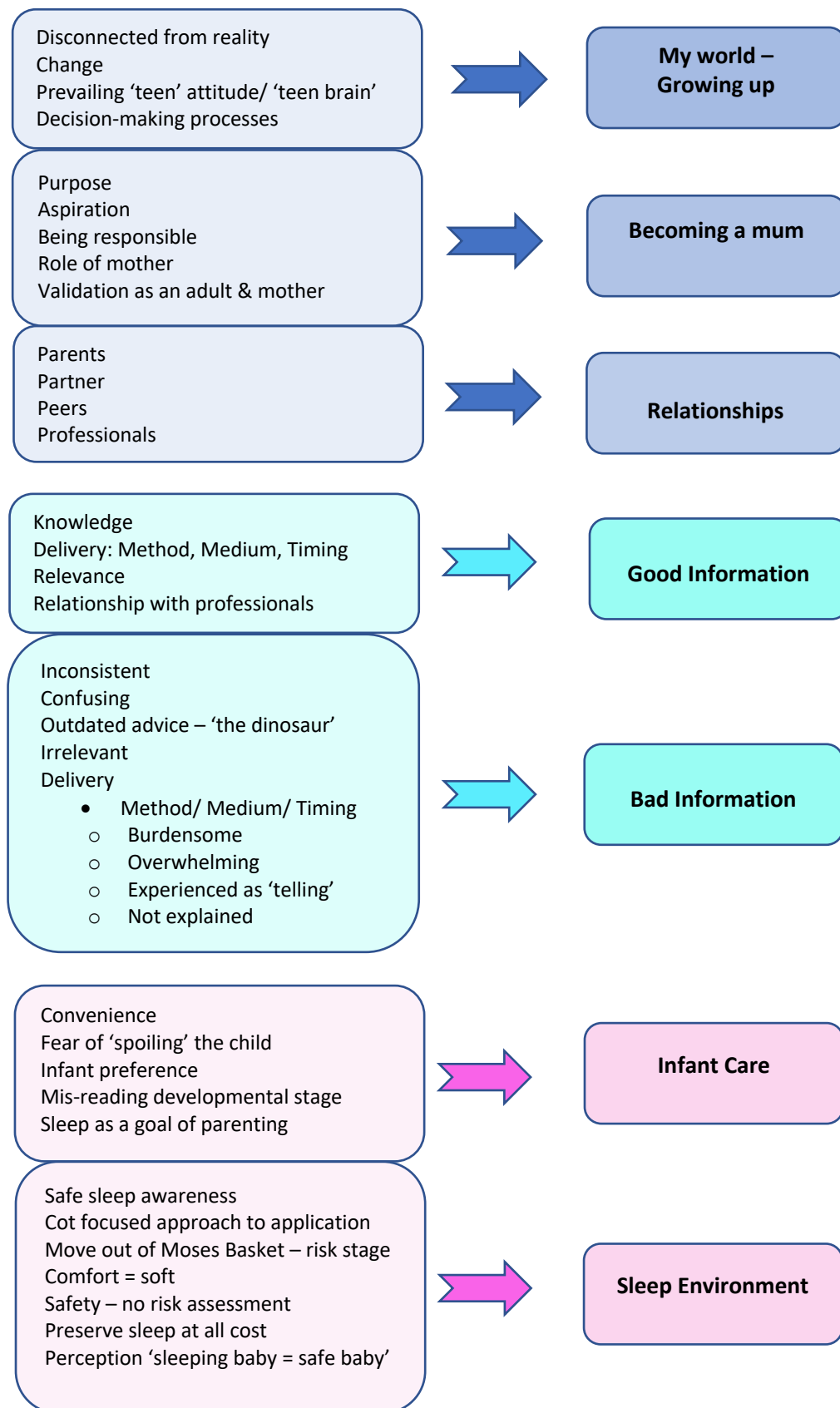
- WELLS
- GOOD
- INFO AS
- EMPHASIS
- OVER-LOAD
- NOT
- RECOGNITION
- 'MUM'
- AM I DOING THIS
- WOMANHOOD
- FACE OF BEHAVIOUR
- SWITCH OFF!

Table 5.3: Subordinate themes identified per participant

	Grace	Sophia	Mia	Evie	Ruby
Growing Up	*	*	*	*	*
Becoming a mother		*	*	*	*
Relationships	*	*	*	*	*
Information <ul style="list-style-type: none"> o Good o Bad 	*	*	*	*	*
Infant-care	*	*	*	*	*
Sleep Environment	*	*	*	*	*
Infant identity				*	*
Maternal health				*	
Housing/ Home environment	*		*		

This grid illustrates a significant degree of similarity in emergent themes across the data from all participants and across all time points. While there were variations within these themes for each participant, the emergent themes were significantly similar to enable grouping into the subordinate themes which then facilitated identification of the superordinate themes presented below. This illustrates that these young women were sharing very similar experiences and talking about similar issues. Despite the overall similarities, some specific differences were noted within the themes of *relationships* and *information*, between the younger and older participants. For Sophia and Mia, these differences were in respect to their peer friendships, relationship breakdown, expression of the ‘loss of pre-baby self’, and their receptiveness to advice and information on infant-care practice. As compared to the older participants who expressed ‘knowing what they were doing’, preferred to be left alone without ‘interference’, demonstrated a more realistic expectation of motherhood, and had support from their partners. These issues of divergence are explored further in the findings chapters.

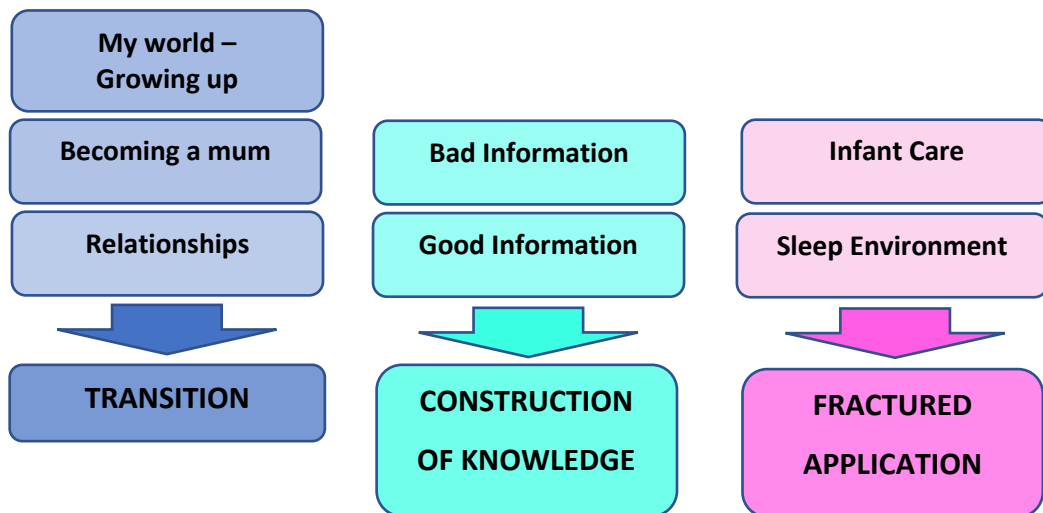
Figure 5.9: Emergent themes to subordinate theme identification



5.4.4 Superordinate themes

Three superordinate themes were identified from the emergent and subordinate themes: **transition**, **information** and **fractured application** (Figure 5.10).

Figure 5.10: Identification of superordinate themes



Transition encompassed the emergent themes related to the important developmental stage of adolescence and a life-changing event. Many of the emergent themes highlighted that this was a period of significant transition to both adulthood and motherhood, and much would change for them along this journey, and as such sets the context for understanding what life is like for these young women, and for those working and engaging with this population. **The Construction of Knowledge** emerged as a theme as information gathering and collation dominated their experiences of becoming a mother, influencing their knowledge, behaviour, and decision-making both positively and negatively; these themes speak directly to the research questions and provide a unique insight into the relevance and importance of different aspects of information delivery and utility. **Fractured application** perhaps offers a unique insight into the functioning of the young mother in relation to infant-care practice and some of the knowledge they have and the decisions they make. This theme demonstrates that translation of information and knowledge into practice are not always adopted or consistently applied for a variety of reasons. These themes are presented in more detail in chapters six to eight.

5.3 Quality, validity & reliability

Validity and reliability relate to the effective generalisability of research results and were developed in the natural sciences as measurements of quality (Ritchie et al., 2014). However, there are fundamental differences between quantitative and qualitative approaches; therefore, the measurements of quality, validity, and reliability must accommodate these differences. Terms such as 'transferability' (Guba and Lincoln, 1994) have been described as more appropriate than 'generalisability'; with transferability being associated with the parent population from which the participants have been selected. This is more appropriate for the findings of this research; however, any transfer of findings from a small homogeneous participant group must be treated with caution. Elements presented such as the thick description of context, researcher interpretation that remains close to the participant narrative, and declaration of researcher positionality, support the critical reader to apply research findings, judging whether findings are appropriate to their particular context. Yardley (2000) offers a framework for assessing quality in qualitative research, which is considered particularly useful for application to IPA (Smith, Flowers and Larkin, 2009:180-183). Yardley's framework is based on four principles: 1. sensitivity to context, 2. commitment to rigour, 3. transparency and coherence, and 4. impact and importance, which are considered in relation to my research here.

1. Sensitivity to context

Consideration of the research questions and context of the research project were prioritised from the outset. Deciding on a research approach that would reveal particular behaviour and decision-making processes of a vulnerable population required a sensitive research approach that would not only gather relevant data but would respect and illustrate the participant perspective; IPA offered such an approach. IPA focuses the research around the participant, and as this project required a series of interviews, building a relationship with participants was an important consideration. Building a rapport with participants required that I was sensitive, accommodating and respectful towards participants in order to facilitate rich data collection and repeated access to them. During the analysis phase, the

researcher engages with the data, remaining respectful of the participant perspective while understanding their perspective through continual reflection. The technical account of findings is supported by participant narrative, ensuring that the participant voice is represented and remains the focus of this research.

2. *Commitment to rigour*

Rigour in this study is demonstrated by consideration and selection of an appropriate methodological approach, recruitment of an appropriate participant group to answer the research question, and the subsequent representation of each participants contribution to the data illustrated within the reporting of the findings (Smith, Flowers and Larkin 2009). The researcher perspective was also captured by the use of a reflective diary; excerpts of which have been included throughout the thesis. Supervisors scrutinised each stage of the research process, and a colleague audited a section of the data analysis. A detailed description of the research process has been provided in this chapter, and a detailed paper trail has been maintained.

- ***Audit***

During the analysis phase, two points were selected for audit; the initial noting stage and a theme identification stage. The first point involved a fellow PhD. student who was also using IPA in a different subject area and was at the same stage of the analysis process. We had attended an advanced IPA analysis workshop, and an exercise during the workshop was adapted as a method of 'inter-rater' audit. Once the initial noting was completed on all the transcripts, three to five pages were randomly selected from three transcripts; corresponding clean transcripts were shared with my colleague. She then completed initial noting on these transcript sections. A face to face meeting was then scheduled to compare the noting stage. This exercise revealed a high degree of similarity across all the transcript sections, with the only notable difference that my noting was much more detailed, as one might expect with familiarity with the subject area. The second audit point was conducted after the 3rd flip chart phase. An extended supervision session with both supervisors provided an opportunity to present and discuss my thoughts on emerging themes and moving towards identifying the sub

and superordinate themes. This process confirmed that my theme identification processes were transparent and were congruent with the raw data. Both these 'check-points' were very useful in terms of developing my ability to manage the data, which at times was quite overwhelming, and affirmation that I was working through the analysis phase effectively, and in a way that made sense to others.

3. Transparency and coherence

Transparency of the research process, from identification of the research questions, selection of the methodological approach, and identification of the participant group, to the data analysis process and presentation of the findings chapters, has been provided within this thesis (Yardley 2000). A detailed description of the data analysis process and subsequent identification of themes through the application of the double hermeneutic has been provided in this chapter. The inclusion of personal reflective excerpts aims to provide the researcher perspective at relevant points in the thesis, demonstrating transparency in the researcher's positionality. Coherence is the alignment between theory, the research questions, and the methodological approach; this has been demonstrated in chapters three and four.

4. Impact and importance.

As a researcher embarking on this project, I considered the research questions to be important, relevant and worthy of constructing a quality research project to answer them. However, Yardley (2000) considers that impact and importance of the research can only be assessed by the 'consumer'. This research is intended to contribute a detailed insight into the lived experience and infant-care practices of young first-time mothers who are considered at increased risk of experiencing SUDI and, to understand what influences their infant-care practice in general, and practices in relation to the infant sleep environment in particular. The intended audience for this research is, therefore, any professional working with young mothers, and particularly professionals working with mothers who may be considered to be at increased risk for SUDI. As stated above, any transfer of findings from this small homogeneous sample must be treated with caution; however, I would argue there is the potential for consumers of the research to

consider the insight that the themes and novel findings present, and their applicability to similar contexts. The particular and detailed perspective of the young mother presented in this thesis facilitates a more profound understanding of their life world and highlights aspects of working with young mothers that may be important for practitioners, researchers and policy makers to consider.

5.4 Introduction to the Participants

Five participants between the ages of 16 and 19 years were recruited to the study via the specialist teenage midwifery service and the Family Nurse Partnership. Two participants completed all three interviews, two completed two interviews, and the original pilot participant completed one interview, creating a total of eleven data sets that were analysed.

Participants were assigned pseudonyms on enrolment into the study, and all subsequent documentation used the pseudonym to protect confidentiality. Pseudonyms were generated by using the top 20 girls' names in 2016 (Office for National Statistics, 2016b); names were allocated to participants consecutively as they were recruited. Interviews were carried out during the third trimester of pregnancy and at four and sixteen postnatal weeks.

Table 5.4: Assigned Pseudonym and Interview Schedule

Participant	Age	Baby	Interview 1	Interview 2	Interview 3
Grace	17	F	38 weeks	Lost contact	Lost contact
Sophia	16	M	30 weeks	4 weeks	16 weeks
Mia	16	M	35 weeks	4 weeks	Lost contact
Evie	19	F	37 weeks	4 weeks	16 weeks
Ruby	18	F	37 weeks	4 weeks	Withdrew

5.4.1 Pen Portraits

Pen portraits of each participant's circumstances were created from field notes following the first interview, and further relevant information was included with subsequent interviews. The pen portraits were intended to provide context for

each participant to enrich data analysis; however, are included here to provide context to the findings chapters.

Grace

Grace was 17 years old and had been unemployed and in receipt of financial benefits, since leaving school. Grace had recently been housed by a charity housing association, into a shared house with another young mother whom Grace had met once. Grace was now two bus rides away from her family home and friends. She was unfamiliar with the area and what facilities were available. At the time of the interview, Grace had only visited the property once, although she had had the keys for over two weeks. Grace was the second eldest of five siblings; her older sister has three young children, and Grace stated that she was therefore used to caring for babies and children. Grace was in a relationship with the baby's father, and she hoped that he would be providing some practical support after the baby was born; however, Grace also stated that he would be going into the army shortly. Grace was a light smoker and drank alcohol before she found out she was pregnant then stopped; her boyfriend was a moderate smoker.

I met Grace at her rented house for the interview; her mother and niece came with her to practice the bus journey with a pushchair. The house was cold, dark, as all the curtains were closed, sparsely furnished and uninviting. There was a pile of post on the floor, and there was a strong smell of tobacco smoke in the property. During the interview, both Grace and her mother kept their coats on, perhaps suggesting that neither of them wanted to be there. Grace presented as conflicted between wanting to move into her house and enjoy her 'new independence' but wanting her mum to be there for help and support. The thought of caring for her baby was daunting, and the preparations she spoke of were all practical. Grace was unable to share her rationale for most of her decisions regarding prospective infant-care, relying mainly on what her mum was telling her. Grace did not refer to contact with professionals and had difficulty recalling having had any information from sources other than her mother and occasionally her midwife, but Grace had not regularly engaged with antenatal care.

The interview with Grace was the pilot interview; however, I was unable to contact her to participate in further interviews, which therefore only provides a 'snapshot' of her life at that time.

Sophia

Sophia was 16 years old. During the interviews and the birth of her baby, Sophia had moved school, moved to a new house, and sat her GCSE's. Sophia was also applying to go to college to study child-care. Sophia was not in receipt of any financial benefits due to her age, but this did not appear to be an issue for her. Sophia lived with her dad, who was supporting Sophia financially, her nan and two younger siblings. Sophia had no contact with her mother or the baby's father. There was no contact from the baby's father after the birth, despite seeing photographs on Facebook, or for the duration of the fieldwork, which was a disappointment for Sophia. Sophia had some experience of young children, caring for her younger siblings when her mother had left the family home. Also, her dad's new partner had young children. Sophia appeared to have a supportive extended family and valued their advice and support once the baby was born. Sophia continued to smoke during her pregnancy, although she stated she did reduce her smoking from seven to three per day, although those numbers fluctuated during the interviews. Sophia has tried various strategies to quit smoking but has found it too difficult. She believes it is better to have cut down. Immediately before the birth, Sophia moved into a larger house with her family. She was excited to have a large room of her own finally and felt she was more important now she was having a baby. Sophia had a good relationship with both her dad and her nan, both were smokers, and Sophia continued to smoke with them; Sophia did not appear particularly motivated to quit smoking, often deflecting or making light of any questions regarding her smoking behaviour. During the final interview with Sophia, a particularly unsafe sleep environment was observed and is discussed in chapter eight. During my interviews with Sophia, I observed her become much more confident as a young woman and in talking about motherhood, compared to our first interview. Sophia was receptive to information and advice from professionals and had developed a particularly close relationship with her Family Nurse, perhaps considering her to be a 'mother figure' in the absence of a

relationship with her mother. Although Sophia could offer the rationale for some of her infant-care practice, some of her explanations, particularly around smoking, were much less informed. This may be the result of inaccurate or incomplete information, although, given her involvement with the FNP with one of the targets focusing on smoking cessation, more likely, Sophia has manipulated that information to suit her 'world view'.

Mia

Mia was 16 years old and lived with her mum and younger sister, and occasionally her mum's partner visited. During the interviews and the birth of the baby, Mia sat her GCSE's and was applying to go to college to study hairdressing. Mia was supported financially by her mother as she was not yet entitled to any financial benefits. Mia has tried smoking, alcohol, and drugs, but states she did not like any of them so does not use any of them currently. Before the birth, Mia was in contact with the baby's father; Mia was hopeful that he would continue to be involved and supportive after the baby was born; however, this was not the case, and at the last interview there was no contact between the father and baby. Mia presented as a shy but confident young woman, with a somewhat antagonistic relationship with her mother. Mia shared that her mother just 'let her get on with being pregnant', and although admitted being unsure about always knowing how to care for her baby, she often rejected the help and advice of her mother. However, Mia also shared that her mother 'took over' aspects infant-care occasionally, without asking, which Mia struggled to challenge. Mia was also receiving the FNP service; however, her family nurse reported having difficulty engaging with Mia, due to Mia often being unavailable for arranged appointments.

The home dynamic also may have impacted on Mia's decision to breastfeed, citing her mother's partner would often be in the house, and therefore, she would have to feed in her bedroom.

Mia appeared to have a better relationship with her dad who lived in another city, some distance away. Mia was making plans to move to her dad's but expected to move after her college course was complete, in around two years. By the time the third interview was due, Mia was spending most of her time out of Coventry,

staying with her dad; therefore, despite creative attempts, the third interview did not occur.

Evie

Evie was 19 years old. This was an unplanned pregnancy and was categorised as high-risk due to Evie's complex health issues before becoming pregnant. Evie has type 1 diabetes which has been mostly uncontrolled since her early teens. She smoked and used alcohol regularly and was underweight due to her poor diet and lifestyle prior to pregnancy, and which continued during the early weeks of her pregnancy. Evie was working during early pregnancy but gave up due to health concerns. Midwives reported Evie as challenging to engage during the early stages of her pregnancy, due to uncertainty whether she wanted to continue with the pregnancy. Evie reported that she was in a stable relationship with the father of the baby; he lived locally and continued to be involved for the duration of the fieldwork. Both families were reported to be supportive. Evie was the youngest of four siblings, she was the only girl, and Evie was still living at home with her parents and one of her brothers in a 4-bed house, in an affluent area of the city, with lots of local amenities. The house was being redecorated during the fieldwork and presented as a little 'chaotic'; the redecoration did not progress over this time. Evie presented as a very confident and self-assured young woman, keen to express her opinions and was very talkative. Evie significantly minimised her health issues and past behaviour, interestingly, linking her health issues to her pregnancy. Evie was also used to interacting with health professionals due to her health history, which may have had an impact on how she related to professionals she came into contact with during the ante and postnatal periods, and potentially myself as a researcher. Evie was also the youngest of four siblings and described a very close relationship with her mother. She also described herself as the 'baby' of the family. The interviews with Evie were interesting, in that she contradicted herself across the interviews on many occasions and adopted quite a 'dramatic' storytelling style at times. She also spoke very quickly, so although the duration of the interviews was similar to other participants, the volume of data generated was significantly increased. Interestingly, Evie presented quite a different persona during the interviews than I had expected from the information professionals had shared

with me when identifying her as meeting the criteria for inclusion in the research. Due to her familiarity with health professionals, my view was that Evie could present a version of herself that she felt was acceptable for her life now as a responsible parent rather than a rebellious teenager. By the end of the interviews, my view was that Evie had used pregnancy positively, as a catalyst to move away from the rebellious teen phase, that she had probably grown out of, but was 'stuck' in that behaviour. Pregnancy and motherhood, therefore, for Evie was also beneficial for her health.

Ruby

Ruby was 18 years old and was in a paid apprenticeship, studying towards an accountancy qualification. Ruby was on maternity leave and planned to return to work. Ruby lived at home with her parents, partner and younger sister. There were several pets in the household, and the house was clean and well presented. Ruby had been in a relationship with the baby's father since the age of 13, and Ruby reported that her partner had lived in her family home since early in their relationship. There was a large extended family, living locally and in Ireland, and during each interview, there was lots of contact (phone calls and texting) from various family members, and a number of family members were present in the household, occasionally interjecting with comments during the interviews. Ruby viewed family members as a good source of support, stating many cousins had infants and young children. Ruby's paternal grandmother offered a great deal of advice to Ruby, which she valued, stating that she had more than thirty grandchildren and therefore was very knowledgeable. Ruby also relied on her mother for infant-care support and advice. Although Ruby was working, her parents still financially supported her and her partner. No-one in the household reported smoking, and there was no evidence of tobacco use. Ruby described herself in terms of social interaction, as being a 'hermit' and 'keeping herself to herself', while she had friends, she preferred to stay at home rather than be out socialising, and Ruby reported that her partner had similar views. Ruby reported that she drank alcohol socially but had not had a drink since the birth of the baby. She stated she would drink alcohol in the future but would only do so when the baby is in the care of her grandparents.

During the antenatal interview, Ruby was unable to provide any rationale for her decision-making processes which improved slightly in the postnatal period. Ruby appeared to have some safe sleep awareness but was unable to state the rationale or the source of her knowledge, citing likely observation of her cousins with their infants. Ruby denied having any safe sleep information during the antenatal period, and that professionals only 'confirmed' what she knew after birth. Ruby was part of a traveller community who had settled into permanent housing, so her attitude and receptiveness to external sources of advice and information are likely to have been influenced by family and cultural traditions.

Across the interview period, Ruby presented as both confident and mature but demonstrated a typically 'teenage' attitude to some aspects of motherhood, particularly around receiving information and breastfeeding. During the interviews, her parents were observed to treat Ruby as a 'teenager' and Ruby appeared comfortable in the teenager role.

5.5 Chapter Summary

This chapter has presented the process of analysis that was conducted with the data. Examples of work have been provided to illustrate the collation and development of emergent, sub and superordinate themes. Issues of quality and validity have been considered, and the chapter concludes with an introduction to the research participants, to provide context for subsequent findings chapters. Although the circumstances of each participant describe particular differences, the majority of the themes that have emerged, illustrating 'what life is like' for them, from their unique perspective of being pregnant and becoming mothers, are significantly similar for all participants. The key themes that emerged, ***transition, information, and fractured application*** are presented in the next three chapters.

CHAPTER 6. FINDINGS: TRANSITION

'[what's it like being a mum?] I don't know, like I feel important, I've like, I've got to do this, like, I'm the chosen one. [laughs]'
(Sophia, 16: IV 3)

6.0 Introduction

The primary research question aimed to understand the lived experience of young women through the process of pregnancy and becoming mothers. During the interviews, the participants shared their experiences from their perspective, about their journey. It became apparent that a number of highly complex changes were taking place concurrently in the lives of these young women. Not only were they negotiating the unexpected journey to motherhood, but they were also transitioning between the worlds of adolescence and adulthood. Almost all of the themes emerging from the data were shared by all participants, albeit from slightly different perspectives, which was an unexpected finding. These emergent themes can be subsumed within three subordinate themes: 1. *growing up*, 2. *becoming a mother* and 3. *relationships*. The emergent themes that comprise each of these subordinate themes are presented here (Fig 6.1) and are discussed within the following sections to illustrate participants lived experience of transition. Researcher reflections are included at relevant points throughout the findings chapters and are highlighted in blue text boxes, while participant quotations are highlighted in italics, in pink text boxes.

Table 6.1: Transition – emergent themes

Emergent Themes	Subordinate Themes
Disconnected from reality Change Prevailing ‘teen’ attitude/ ‘teen brain’ <ul style="list-style-type: none"> Decision-making processes 	Growing up
Purpose Aspiration Being responsible Role of mother Validation as an adult & mother	Becoming a mum
Parents Partner Peers Professionals	Relationships

6.1 Growing up

As a developmental stage, adolescence is one of complex change over the course of several years. Research dating back to the early twentieth century (Hall, 1916 in Blakemore, 2018) suggests that adolescence may continue into the mid-twenties, and more recent research has identified that the young brain continues to develop increasingly complex processes throughout this period (Blakemore, 2018), substantiating that the transition to young adult can take many years to complete. Adolescence provides the context of these participant conversations, and in addition, these young women were negotiating another significant life-changing process, the transition to motherhood.

It is no surprise then, that all participants talked of rapid and inevitable change, in terms of them having to grow up quickly and enter the adult world, take control of their life, make important decisions and take responsibility for themselves and their baby. However, there was some conflict for the participants in this transition, and a reluctance to move into adult independence, which is an interesting finding; adolescents, in general, are eager to move to adult status, but perhaps without the responsibility. For these young women, pregnancy required them to take responsibility and grow up sooner than perhaps they would have. This is perhaps suggestive of a typical adolescent conundrum, they want to achieve adult status

quickly, but those faced with having to grow up quickly, then resist it for the relative safety of adolescence.

As a result of this internal conflict, all participants had difficulty visualising the reality of being a mother, and were not, or did not want, to think that far ahead. They were 'just pregnant', and their focus was on what was relevant and important in their lives at that point; studying for exams, focusing on their health, continuing to work or finding somewhere to live. However, once pregnant, these young women were required to think about important and impactful issues and make important decisions. Decisions such as whether to continue with the pregnancy and where they would live, to the impact of their decisions on their partner and other close relationships, to preparing for their baby in terms of buying or obtaining necessary equipment and how they would feed their baby. During the antenatal interviews, data revealed that participants appeared to have 'parallel' lives – an adolescent self and a pregnant self.

6.1.1 Disconnected from reality

The antenatal interviews with participants achieved less spontaneous narrative data than from later interviews. I was concerned that the young age of the participants might impact on the volume and quality of the data, and their willingness to engage with the subject matter. I was also aware that I was asking more questions during these first interviews. During data analysis, however, this was the case for all participants and contributed to the finding of a 'disconnect' between the physical reality of being pregnant and their need to function as adolescents until the baby was born.

Data from the antenatal interviews revealed that there was a shared feeling of 'disconnect' between the reality of pregnancy and their ongoing life. This disconnect may have provided a coping strategy for these young women; they had an intellectual awareness that they would have a baby in the future, which seemed to allow for decisions and preparations to be made, but the actual embodiment of

pregnancy was ‘unreal’ for them. Mia and Grace were unable to express in any detail their feelings on being pregnant, and even less about becoming a mother.

‘Fine, I guess...’

(Mia, 16: IV 1)

‘Erm, [Pause] good? [in what way?] [Pause] Erm [long pause] don’t know [laughs].’

(Grace, 17: IV 1)

In Grace’s quote, the inflexion in her response suggests she may be looking for approval, is being pregnant good? Alternatively, is it OK to feel good and express that about being pregnant? Both Sophia and Evie in later interviews reveal their anxiety about experiencing adverse public reactions to their pregnancies, so Grace may have experienced negative reactions and therefore is unsure whether she is ‘allowed’ to enjoy being pregnant. Both Ruby and Sophia talked about their pregnancies as not being real for them, and Ruby’s difficulty in finding words to express how she felt about her pregnancy illustrates this feeling of disconnect that the participants experienced.

‘I just kinda like went along with it, I don’t know, I don’t know whether I just felt like, I felt like I was in a bit of a day dream, I dunno, I didn’t think ‘oh I need to change this and I need to do that’, I didn’t, didn’t really think how it was going to affect anything, I just thought I was having a baby and we were excited about it and didn’t think much into it all at the start, and it didn’t really seem real.’

(Ruby, 18: IV 1)

‘It’s, oh I don’t know, [pause] it’s so like every emotion, [laughs] it’s overwhelming like, [pause] doesn’t seem real.’

(Sophia, 16: IV 1)

Also, Evie talked about the ‘shock’ of finding out she was pregnant as if some traumatic event. Again, illustrating a disconnection from reality – this was unlikely to have been an ‘immaculate conception’, Evie was engaged in a relationship that could potentially result in a pregnancy,

'Even though it was a huge shock at the beginning. It was a huge shock, it just sort of came out of nowhere...'
(Evie, 19: IV 1)

However, Evie had significant health issues and so the reality of discovering she was pregnant, and the resultant implications for herself and the baby may well have been a traumatic event for her. This disconnect continues for Sophia and Ruby through birth and the early days of motherhood, as the reality of being a mother percolates their consciousness,

'It was just un-real, like, there was so much going through my head. [laughs] Like, I'm actually a mum, like he's mine. [How was that different to being pregnant?] Oh, it's so much better because I can see him, and I can hold him. And it's like he's properly here rather than just hanging around.'
(Sophia, 16: IV 2)

[When did the pregnancy become real for you?] 'Not til the end [labour ward probably – granny interjected] Yeah, obviously I had a big bump and I was uncomfortable, and I felt rubbish, but I still, I just felt the day would never come, it just didn't seem real. Obviously, I knew she was there, and I spend so much money, like all my wages on her and I spend it and I knew she was coming but I just... I had everything, I was prepared for her, but I just felt like, I felt like the day would never come. It's just so overwhelming. Even now I still think someone's going to come in and say, 'that's my baby can I have her back?' [really?] yeah, I don't feel like she's mine, yeah, I'm in this big like day dream, I just stare at her, I do, I just stare at her for hours and I think 'oh my god''
(Ruby, 18: IV 2)

All participants talked about being overwhelmed; this word was used several times by participants to convey the emotional 'maelstrom' they were experiencing. And, perhaps as a consequence of being amid this emotional storm, their focus was on survival and the present, rather than on what the future would bring. In response to questions about their pregnancy and preparation for motherhood, they were required to acknowledge their pregnancy as a reality. In doing so, participants presented a constructed future, a 'fantasy future', consisting of a supportive partner, a home and the expectation that they would be living as a family. This construction of a positive future could serve either as a potential coping

mechanism to detract from the scary thought of the unknown or because it was too difficult to 'imagine' what life would actually be like, or they wanted to present a picture of stability and preparedness for motherhood to counter the current negative stereotype of a 'teen mother'. Grace presented a picture of a partner who would be there to support her and help with the baby, however, she was also revealing the reality, that he would not be living with her during the first year, and revealed later in the interview that in fact, he would be going into the Marines shortly after the birth,

'Yeah, he'll be like waking up in the night and stuff and... [Does he live ...] at home with his parents, yeah. [so, will you live together?] Erm... yeah, one day, because this is only a shared accommodation and I'm here for a year, I'll be here for a year'
(Grace, 17: IV 1)

Similarly, although Mia expressed some uncertainty, she was hopeful that the relationship with her partner would continue and be positive in the future and illustrated that her partner had the means to support them as a family,

'I think so, I don't know, I hope so, we'll have to see [laughs]. Yeah, he's 17, he's got an apprenticeship then he's going into the army'
(Mia, 16: IV 1)

Unfortunately, by the second interview, both Mia and Sophia were no longer in contact with their partners, and neither father had ongoing contact with their baby.

6.1.2 Change: Having to grow up

During the interviews, there was an apparent tension between wanting and needing to grow up and wanting to remain in their familiar 'child-like' world, where engagement with these important decisions about life was not a feature, perhaps contributing to this 'disconnect'. As a consequence of this tension and the obvious young age of these participants, the interviews occasionally revealed

what I have termed the 'teenage attitude'. This descriptive term is based on the developmental stage and behaviours of the adolescent, and certain behaviours and attitudes expressed during the interviews can be linked with elements of this developmental stage such as issues around identity, ego-centric thoughts and behaviours, and an 'I know it all, do not tell me' attitude. This was a thread that permeated many of the emergent themes and therefore is incorporated through all sections as relevant to illustrate a variety of points. It was clear that these young women were grappling with having to grow up due to their pregnancy, but they were also adolescents, discovering who they were and refining their identity within their peer group and learning the skills of adulthood. There was subconsciously a reluctance to move through this stage more quickly, as dictated by external factors, such as being pregnant.

Peer relationships

Mia, Sophia and Ruby were all studying for exams and talked of a close peer group during the early stages of pregnancy, but which changed during pregnancy. These three young women appeared to have the greatest difficulty in talking about their pregnancy and the future. Mia and Sophia both changed schools, moving away from their usual peer groups, and both then had to travel some distance to the new school, isolating them from their previous friends. Although all participants talked about changing peer relationships, Mia and Sophia, in particular, appeared to feel the changes more acutely and talked about their peer friendships and how these changed during their pregnancy and transition into motherhood.

'Erm... So, I've still, I've still got my main friends, but I don't like to speak to any of my other friends, it's like, I speak to them if they are like pop up to me [on social media] but otherwise I don't really speak like, to them. [Why is that?] Erm... 'cos I don't go out as much and I'm not as fun... [laughs] I'm a mum, I've got mum rules [laughs]. [Do you feel different, now you are a mum?] Erm... I don't know, I don't really feel, feel different, I still feel like me just with a kid, just me really. [But different from your friends?] Definitely.'
(Mia, 16: IV 2)

'Well I've not been going out since I got on in the pregnancy, and I'm not really seeing friends but after the baby comes, they will all want to come round to see him'
(Sophia, 16: IV 1)

'I think my social life's decreased a little bit, I think the people I used to hang around with like, before I was pregnant, that group's kind of changed a lot, 'cos it's like they seem really immature compared to me now. [laughs] So, it's like, oh, so I've just got like, little 'mum' friends. [laughs]. [How have your old friends changed?] Like, they just wanna go out all the time and like, 'oh, I'm going to so and so's, and I'm gonna like get drunk'. Oh, that's great, have fun, you wreck your liver! [laughs] You know?'
(Sophia, 16: IV 3)

Mia and Sophia both described their friends as having changed, which is an interesting perspective. Mia uses the context of her not going out as much and 'becoming boring', she has to live by 'mum rules' now and cannot do the things that her old friends get up to. Sophia similarly talks about the 'antics' her old friends indulge in, disparagingly. Her comment about 'have fun, you wreck your liver' appears to be delivered from the perspective of being a responsible 'parent'. However, my impression from both Mia and Sophia was that they felt they were missing out on what their friends were getting up to and were almost 'excluded' from their old friendship groups. The point Mia makes about contact with her friends on social media being curtailed is interesting. Adolescent peer relationships are mainly conducted over social media; both Mia and Sophia commented that they did not use their phones much after the birth of their babies. This could be due to not having much time, although this did not appear to be the case, rather and more likely, they did not want to know what their old friends were getting up to, this was a peer group from which they now felt excluded.

Due to the changes in their lives and the new requirements of motherhood, both Mia and Sophia were required to source new 'friends' and developed 'networks' with others in similar circumstances. Mia and Sophia met one another at their new school, and due to their pregnancies, then met other pregnant young women and mothers, however, this network was small. These new friendships, born from

necessity, were not viewed as 'real' friendships initially but developed over time based around their shared circumstances.

'Yeah, I know some older girls but not my age. Well, they talk to me 'cos I'm later on in pregnancy so they're like 'oh god I've got these pains' and stuff like that and I'm like, 'oh that's fine' and they're like 'you're so helpful' and I'm like, 'I was like that once' [laughs]'
(Mia, 16: IV 1)

'We're like friends where we can like, meet up for the babies, like to meet and learn. But like, we're not like, good friends, but we know each other.'
(Mia, 16: IV 2)

"Cos it's just easy, you know, and they all, they all kind of understand the whole, 'ah no, I couldn't do that today, but can we do it another day', kind a thing.'
(Sophia, 16: IV 3)

There is a necessary baby focus to these new acquaintances, shared experience and acceptance of how having a baby can dictate what you do, and how complex an activity such as just meeting up with friends can be.

'Erm... well, either my friends will come here or like, I'll do a trip like I'm doing today.'
(Sophia, 16: IV 2)

Sophia equates meeting up with her friends like a 'trip'; her description of preparing for the trip is similar to that of planning an 'expedition', certainly, things she did not have to think about before having a baby,

'Well, if I do go out, I have to make sure I have my bottle warmer prepped, all his nappy bag ready, otherwise, I'm stuck, I have to go through the nappy bag about three times to make sure I have got everything. Laughs. Erm.. Then, always bring his rain cover and extra blankets, so, I'm like a lot more organised than I was. Laughs'
(Sophia, 16: IV 2)

Evie and Ruby, being slightly older and having been working, had developed friendships beyond their school peer group and appeared more selective, identifying a particular friendship they valued. Both Evie and Ruby had large and extended family living locally and included these as a source of socialising and support, and both expressed that they were ready to be leaving their 'going out' days behind them, also stating that their partners shared that view.

'My best friend, she's godmother and lives in L, but she'll come down and my friends will come here, and we've got huge family, I've got 3 brothers and got all their girlfriends and one of 'em is pregnant same time as me, and there's always people around so I don't think it will be any different, just everyone comes round here, yeah so...'

'I mean I'm the most boring teenager, I don't like going out, I find clubbing really boring, you can only do the same thing for a limited number of hours, I didn't really drink so I mean that won't be any different. So, I didn't do anything anyway, I didn't really go out, so it's not going to be like a complete change for either of us, which is probably a lot better 'cos we're not going from like one end to the other in my eyes, so I'm already used to it'
(Evie, 19: IV 1)

'I went out sometimes with my friends at the weekends and stuff, but I didn't really go out much before, so it weren't like a big change in my life. I'm a little hermit [laughs]. I kind of keep myself to myself, really. One of my friends is now having a baby, she's due in October, so when he's here we can have little play dates and stuff, but she, she comes round and she's supportive too. I kind of keep myself to myself anyway...'

'They've been round with presents and stuff and they are really supportive, but it's kind of hard for me to... I don't know, I feel we're just not on the same level anymore, I'm focused on her [baby] and they..., just because they haven't got children and stuff they just, they like want to go out, and it's just different now, so yeah. And I'd rather stay in with her anyway, than go out. And you just get on with your life, don't you really?'
(Ruby, 18: IV 2)

Although there is only a two-year age difference between the younger and older participants, the younger women seemed to be struggling to cope with these relationship changes. They reported not going out as much, and perhaps felt isolated but preserving their old peer friendships was not seen as being within their sphere of control; whereas the older women had been working and had

smaller but perhaps better-established, more mature friendships, and also larger families, providing stability in their relationships. Mia and Sophia expressed feeling 'stuck'; stuck indoors and feeling isolated and lonely, and missed going out; whereas Evie and Ruby were happy to stay in and have friends and family come to them. Although Evie and Ruby seemed to accept the transition that having a baby brought in terms of their freedom being curtailed, and despite both saying they did not go out much prior to being pregnant, during interviews, family members who were intermittently present stated otherwise, giving the impression that both Evie and Ruby did previously go out quite a lot. Perhaps they had more realistic expectations of what motherhood would bring, and both Evie and Ruby were surrounded by family members who had had babies recently, which may have influenced this acceptance of the reality of motherhood. Evie and Ruby also had slightly better financial resources than Mia and Sophia, which also may have reduced feelings of being 'stuck' or 'trapped', and both the older women had ongoing relationships with their baby's father.

Lifestyle

The profile of the participants included Mia and Sophia who were still at school and not entitled to any benefits; Grace who was unemployed and had recently received benefits; and Evie and Ruby who had been working, although Evie had stopped work due to health reasons and was now in receipt of benefits, and Ruby was on maternity leave. Despite Ruby and Evie both recently working, and being in receipt of some financial income, their parents were still supporting them financially, and both were living at home with their parents. Both Ruby and Evie expressed feeling happy and secure at home and wanted to be near their family and expected their parents to help with both infant-care and financial support. Interestingly, none of the participants expressed concern about financial issues or talked about a low income as problematic, all of them believing that their parents would continue to support them. Also, none of the participants had left home, (except Grace, who had recently taken possession of a flat but had not yet left her family home), or been managing their lives independently, with their parents continuing to provide meals, doing their washing and providing taxi services. So,

although transitioning to motherhood, these young women were still living, and being treated, as teenagers.

'I'm living here with my mum, dad and my brother. So, got all the help, they were very excited as well, but I wouldn't move out anyway 'cos I'm bit of like erm... I'm glad I've got my mum there, so I know she'll help me, you know she's had four children, so she like knows what she's doing, and I think I need that help'
(Evie, 19: IV 1)

Evie had also described herself as the 'baby' of the family before the start of the interview recording, and expressed she was not sure how she felt that she would no longer be in this 'family position'; interestingly, her mother stated she would *'always be her baby'*. This comment is perhaps indicative of a family view of the pregnant adolescent, resulting in conflict for the parents being able to 'allow' their daughters to grow up and become mothers. Status within the family seemed important to the participants, wanting recognition that they were growing up and needed to be treated differently,

'[the family] are moving to a bigger house and I'll have a big room on the first floor.'
(Sophia, 16: IV 1)

So, they wanted to be seen to be growing up and treated differently, but they expected that their parents would continue to look after them, provide for them and help out with infant-care, and the parents were equally complicit in this, and perhaps being less likely to view their pregnant daughter as moving toward adulthood.

'Yeah, mum & dad done the night feeds last night. Definitely 100%, they help loads. They know, they've had their own kids, they know exactly what they're doing'
(Ruby, 18: IV 2)

'Erm.. like night feeds, say if she's not working, like after, then, she'll get up and like feed him. She won't wake me up, she'll just get up and feed him. [OK] And I'm like. I'll wake up and think 'oh my god, he's slept all night' and my mum is like, 'no, I fed him' and I'm like 'oh, ok.'
(Mia, 16: IV 2)

These quotations also illustrate further their 'teen attitude', they want and expect help sometimes, but then can actively reject help when they do not feel they need it, or can feel undermined by their parent's help, which is discussed further in the relationship section below (6.3.2).

'My mum, sometimes she tells me to do this and I'm like 'mum, I know what I'm doing, just leave me alone'.'
(Mia, 16: IV 2)

Grace was the only participant who was in the process of moving out of the family home into a housing association shared house. Grace expressed mixed feelings about moving out: while she was excited about her new independence, she was very apprehensive about being on her own with a new baby. She would be living two bus rides away from her family and friends, in an area that was unfamiliar to her.

'Yes, I'd like my mum to show me the ropes, show me how to do things rather than doing it on my own. I'd like my mum to move in [laughs]'
(Grace, 17: IV 1)

Grace had bought a travel cot from the outset and stated she intended to be travelling back to her family home frequently. Interestingly, Grace never moved into her house, and I was unable to contact her after the birth of her baby.

6.1.3 Prevailing ‘teen’ attitude/ ‘teen brain’

From the data, there appeared to be an apparent reluctance to make the transition to independent adult. Although participants wanted validation, and to be regarded as an adult, and were trying to move towards what they considered more adult behaviour, the issues that were of importance to them were rooted in their adolescent world. It was as if they were just getting to grips with being an adolescent, and now they were required to think and behave like an adult. There were also possible implications for the pregnancy if they continued with some of their adolescent behaviours, such as diet and smoking.

‘Just erm... eating healthy, I wasn’t before. Crisps, chocolate, biscuits, takeaways [laughs], had lots of takeaways, that was like every weekend, [laughs] and I... just keeping on top of things now and get organised. I wasn’t organised before. And keeping on top of my room, it was really bad before [laughs]’
(Mia, 16: IV 1)

‘Erm, try to eat healthy. [And do you smoke?] Yes, I’ve cut down. [So why did you decide to cut down?] For the health benefits for the baby, I wanted to stop but cutting down is less harmful than 7. [What are the benefits?] The baby gets less oxygen for the 20 minutes after a cigarette, [thinks] small, don’t grow, erm.... And there’s a chemical that effects, erm... [thinks] the brain?’
(Sophia, 16: IV 1)

‘I was [smoking] before I was 2 months [And you just stopped?] Stopped. Yeah. I knew it was hurting her [baby] [So why is that?] Well I wasn’t a heavy smoker anyway, I’d only be smoking about 3 – 5 a day, I’d before... there’s just no point in smoking’
(Grace, 17: IV 1)

‘I smoked when I was younger quite a lot, but not really since I was pregnant. I don’t really like drinking either, so I don’t feel... I haven’t missed out on anything as I didn’t really enjoy any of it.’
(Evie, 19: IV 1)

These excerpts reveal that the participants were listening to advice and taking some of the messages on board; this theme will be explored further in the next chapters. This quote from Evie reveals that pregnancy may have provided the catalyst to her changing previously challenging and non-compliant behaviour. Although Evie states she smoked when she was younger, the distance of time

travel is very short, however, her change in status, to being pregnant, can be used as a time marker, separating her 'recent younger days' from her transition into becoming an adult. Within this next paragraph, Evie wrestles with the recent past and the present, offering polarised thoughts on the same situation, perhaps viewing the same issue from different perspectives, from non-compliant teen to responsible adult, when asked whether pregnancy had prompted any change in lifestyle or behaviour,

'Not really, I mean I was quite ill anyway, I'm type 1 diabetic, so I had to get that really under control, so that was a change, but that was a good change anyway, so that was fine. Apart from that I haven't changed anything, to be honest I was really quite healthy before so I haven't really changed a lot, I guess I'm quite normal, just, I'm obviously, it's been different, 'cos I used to be really skinny and now I'm carrying all this weight, so it has been quite hard, its put a lot of pressure on my kidneys as well, so I've not been able to do a lot, I haven't had to change much, which is good.'

(Evie, 19: IV 1)

When Evie was identified as a potential participant, the midwife had revealed that there were significant challenges in engaging Evie during early pregnancy and that there were significant health issues, including being significantly under-weight and kidney damage as a result of many years of poor diabetes management. Evie was also reportedly still smoking and drinking alcohol. Contrary to this view, Evie presented as quite a mature young woman, who was prepared to take on the role of motherhood. Evie couched her health issues and previous non-compliance as health issues related to the pregnancy, and minimised her role, and responsibilities in managing her diabetes,

'Well the pregnancy... it was obviously her, 'cos it makes your hormones all crazy, so a lot of it was her. But before, normally it was OK, but it had its up and down days, but I think that is just normal, but when I was younger it was terrible [diabetes management], that's because I just wanted to do what was normal and do what I wanted to do. But now it's fine.'

(Evie, 19: IV 3)

So, for Evie, she alludes to how difficult managing her diabetes had been, she wished to be like her peers, she wanted to be 'normal', and as a result, she rebelled against having to manage her health. The pregnancy offered an opportunity to move away from her 'rebellious' teen years, to use this as a stepping stone to adulthood. Also, in doing so, she used the pregnancy as a portal to step away from her health issues and minimise the consequences of her previous behaviour. As such, this represented a significant and impactful decision for Evie.

Decision-making process

Acquiring skills in decision-making is an essential aspect of growing up and moving to adulthood. These young women were being accelerated through this important developmental stage and as such their decision-making skills vacillated between impulsive adolescent processes and reasoned and mature adult decision-making processes. However, evidence of the latter was more difficult to elicit from the data. Many of the decisions they made, appeared either impulsive, lacked explicit rationale or were supported by flawed or incomplete knowledge; or participants were just unable to identify why they were making decisions or were 'instructed' by someone they trusted, and therefore did not question or challenge the basis for the decision. This exchange with Grace illustrates this issue:

[how did you choose your cot?] 'I just bought it... basically, if you see something you need to buy, then buy... then just buy it'

[Where will she sleep?] Next to my bed [how did you decide that?] Just thought of it'

'I thought you just had to use blankets [how do you know that?] 'cos my mum told me'
(Grace, 17: IV 1)

Despite asking how she had come to these decisions, Grace was unable to offer any rationale, except that her mum had told her what to do. Grace trusted her mum's guidance and did not question this. There was also an implicit expectation that any products purchased would meet the required safety requirements, and little further attention was paid to safety aspects of equipment.

'I just liked it, so I bought it, I didn't look into anything like Google. My auntie's [aged 25] just recently had a baby, and she like Googles everything, it's gotta be like perfect detail of what it does and why this is going to be good... but I didn't do that, I just, I liked it, so I just bought it.'
(Ruby, 18: IV 1)

'Erm.... I wasn't looking for anything in particular, I was looking for a cot that you can lower it down, so it lasts longer. Em... I wanted white and when I knew I was having a girl, I wanted it to be all princessy, like the canopy that sort of goes over it at the sides and that's about it, and a pretty pink mobile to go over it, but I wasn't looking for anything in particular, as long as it looked nice and it was stable, I think that was about it. [Did you think about safety?] Yeah, like I said I never ever looked at the ones that go next to your bed, never looked at them, just would never get one of them, but apart from that normal cots are quite safe, make sure I had a good mattress, and my mum helped me choose [but it's all different now, I've had 4 kids, but they never told us about any of this mattress stuff – granny interjected] So, I did take into account all that sort of stuff and I did have my mum in my earhole about what I had to do, that's fine 'cos I needed it.'
(Evie, 19: IV 1)

Another issue arose with obtaining second-hand equipment. Both Mia and Sophia bought second-hand or were given Moses baskets. Mia was told about mattress safety, but Sophia was not; this issue is discussed further in the next chapter, but Mia went along with being told that she needed a new mattress because she trusted the source of instruction; however, Mia did not know why she needed to buy a new mattress.

[Is there anything that you'll change about the Moses baskets?] 'No..., oh... the mattress [laughs]' [why?] 'Cos I have to.... 'cos I've been told to [laughs] by the midwife. Erm, well she said a new born baby needs a new mattress [why was that?] erm.... not sure.'
(Mia, 16: IV 1)

Infant feeding decision

One of the decisions to consider during the antenatal period concerned the choice of infant feeding method. All participants had gathered some information and

demonstrated some process of rationale-based decision-making. All of the participants stated they intended to, or at least try to breastfeed,

'Erm.. I would like to, well my mum did it so... and I just wanted to [are there benefits to breastfeeding?] Erm... better nutrients I think and something to do with like, erm... what's the word?... you know from the air, the.... Erm the... [immunity?] Oh, yes, I can't say the word [laughs] that's it... oh, and it's cheaper [laughs]' (Mia, 16: IV 1)

'Erm... just because it's good for her really, all the goodness and stuff, yeah, I just wanted to do it.' (Ruby, 18: IV 1)

'Breastfeeding and bottle feeding, and... I know you can mix the two, so I think I might try it... [why would you do that?] I don't know. [Are there benefits to breastfeeding?] Yes, it reduces the risk of breast cancer, it's good for the development of the baby's brain and it's erm... it's good for their stomach and it helps them grow better ...' (Grace, 17: IV 1)

'[why will you breastfeed?] 'Cos its good for the baby, and I just wanted to. [Did you look on the Internet for information?] Ah, yes, breastfeeding stuff when I was deciding; yeah, said about more vitamins being in breast milk than in the tins and its better for the baby.' (Sophia, 16: IV 1)

'...obviously I've learnt about breastfeeding, 'cos that's what I wanna do' (Evie, 19: IV 1)

All participants could identify at least one beneficial reason to breastfeed, although the attitude was more of giving it a try than being committed to breastfeeding from the outset. Mixing breast and bottle feeding was mentioned by three participants and was considered to be a good option; however, they were not sure why this would be a good option, nor could they verify the source of this information. Data on feeding methods in the postnatal period revealed some interesting perspectives from the participants. There were varying degrees of success with breastfeeding, and a link back to 'teen' characteristics in their lack of ability to persevere with the work of breastfeeding was evident from their accounts.

Attitude appeared to be a significant driver in their ability to persevere with breastfeeding, and at early signs that this was going to be difficult, breastfeeding

was quickly abandoned, often within the first forty-eight hours. Perhaps this was related to the curiosity of wanting to give it a go, but the reality of it was not acceptable to the young mother. Alternatively, perhaps the commitment was lacking from the outset, as identified in the antenatal interviews. Although they expressed the intent to breastfeed, the reality was that it was too difficult and therefore not worth persevering, despite knowledge of some of the benefits to themselves and their infant.

'Yeah, I tried to erm.. I breastfed him, well, I syringed it out for two days, so he got like the first bit. And then, 'cos obviously he wasn't getting enough, 'cos it was like a little syringe, and then, they were like we can keep trying or we can put him on bottle feeding. But if we'd of kept trying he'd have lost a lot more weight, 'cos he was already 5lbs, and that could be like, quite dangerous. So, I thought I'd just put him on the bottle. Yeah. 'Cos, he needs fattening up anyway, well, he don't now. [So, how did you feel about that?] A bit upset, but then, once my milk came in, I was kinda glad, 'cos it hurt so much. [was he feeding from you then?] No. But when my milk came in it felt like I'd like, sunburnt my breasts [laughs]. It was horrible.' (Mia, 16: IV 2)

'He won't latch on. I did try and at first, he did, but then I tried later on in the morning and it just wouldn't work, so... [Did you have help?] Yeah. Erm.. they taught me how to hand express and things like that, but it just wasn't working, and then before I was discharged, they said if I wanted to try and do breastfeeding, they'd have to keep me in more, and I was like, no! I'm just going to bottle feed, I can't be in here any longer [laughs]. I was just going to give breastfeeding a go, and then if it didn't work, I was just going to bottle feed.' (Sophia, 16: IV 2)

'Yeah, I was just adamant that I was going to breastfeed, but when she come out and she was hungry, I just said give her a bottle, and I couldn't do it. She's, she couldn't latch on and she was struggling, so [did you have much help from the midwives?] Yeah, they helped but, I just, she was just so hungry, I just said just give her a bottle, I can try [breastfeeding] later' (Ruby, 18: IV 2)

'So, I breastfed, erm.. she didn't like it.. AT ALL, [how long did you ..?] Two and a half weeks, she hated it. She wouldn't latch on, and when she did she'd scream and wouldn't do anything, so then I expressed and she had my milk, but because then I was ill 'cos my bloods were low and my iron levels were really low, my milk just cut out, which is a bit annoying but she had my milk for two and a half weeks, so I mean she got the best of my milk anyway, but it was a bit annoying that she didn't like it... She really just didn't like it at all, but then again she was born 3 weeks before her actual due date, so she was obviously behind everyone else, so, I'm not surprised that she didn't really get on with it, which is like I say a bit of a shame, but she just prefers, she just prefers the bottle. She was fine with my milk in a bottle, but obviously that cut out which was very irritating. But there was obviously nothing I could do about that just because I was ill, it just completely cut out [what did the midwife say?] So, they said you can't really reverse it once it cuts out so there was nothing I could do, so I tried to use a breast pump to try to get it to come back again but it wasn't working at all. So, there was nothing I could do which did annoy me, but at least she got two and a half weeks so, she got something which is the main thing.'

(Evie, 19: IV 2)

Evie persisted at breastfeeding the longest, but her protestations that the infant 'hated it' offers an interesting perspective. The 'fault' of breastfeeding being unsuccessful was placed with the infant. Similarly, both Sophia and Ruby's attempts were also thwarted by the infant who 'failed' to latch on. Mia's dilemma was one of not feeding her baby adequately, whether this was actual or perceived, the feeling of starving your baby is potent and would encourage the most committed breast feeder to question their ability. Perhaps for these young mothers, the practical activity of bottle feeding their baby was something that they could do with some degree of tangible success, the babies could be seen to be taking a specified amount of milk and were perceived to be more settled and to sleep and be content for longer.

So, was the early abandonment of breastfeeding based on adolescent ego-centric attitude or on their need to be seen to be good mothers? Interpretation of the data suggests the decision to move to bottle feeding was weighted towards attitude, and that breastfeeding was just too much hard work – which may equate to the adolescent ego-centric attitude.

The questions related to whether the participants had support and advice to continue to breastfeed, were either circumvented or dismissed or that professionals advised them to give up, inferring that it may affect the health of the infant if they were to continue to breastfeed. Perception of help from the midwives may have been distorted, or the reality may have been that the midwives did persuade them to bottle feed, assessing that their attitude was not one of persisting with the work of breastfeeding. Some of the reasons offered by the participants for giving up breastfeeding did not make physiological sense; however, these reasons were not challenged as these accounts are those belonging to the participant and have been interpreted as such.

This section illustrates the variance in decision-making related to the struggle between being an adolescent and trying to move towards adult decision-making behaviours and attitudes. For all of these young women, they could logically identify why they should breastfeed and expressed that they wanted to. However, the reality and difficulty of breastfeeding may have caused them to revert to adolescent decision-making processes, leading them to abandon breastfeeding.

The subordinate theme of '*growing up*' encompasses the emergent themes presented above. Overall these young women were adolescents who were becoming mothers and as such were required to accelerate through this important developmental stage. There was a disconnection, resistance and conflict within the participants' narrative, each tackling the challenges of this period of change in their own way but experiencing very similar issues. The data illustrates that there was much change, and 'toing and froing' for participants between adolescent attitudes and behaviours and what they perceived as adult attitudes and behaviours; as if trying on a new overcoat that was too large for them, the 'overcoat of adulthood', that in time, they would eventually grow into. While participants were negotiating their path to adulthood, a more pressing event overtook them, that of becoming a mother.

6.2 Becoming a mum

All participants had difficulty in expressing what life might be like in the future for them from their antenatal perspective; however, once they had a baby, they were

able to communicate thoughts and feelings articulately. The early days of motherhood were described as unreal and a bit of a blur, but once they started to settle into routines, they described motherhood in a variety of terms, both positive and negative.

Of note, and relevant to mention here is how these young women spoke candidly of their experiences, thoughts and feelings during the postnatal interviews. This was a significant change from the antenatal interviews.

6.2.1 Purpose, responsibility and aspiration

Motherhood gave them a sense of purpose, required responsibility and encouraged aspiration. Sophia talks of being the 'chosen one'; as if motherhood has been bestowed by some higher power and with that she must step up and take responsibility. This realisation unfolded over the two postnatal interviews,

'It makes me feel weird at times, 'cos it's like, I'm responsible for another person. [laughs]' (Sophia, 16: IV 2)

'Erm... You know, coming to the realisation that it's not you anymore, there's another b., there's another person. And that person is solely dependent on you.' (Sophia, 16: IV 3)

'I don't know, like I feel important, I've like, I've got to do this, like, I'm the chosen one. [laughs]' (Sophia, 16: IV 3)

Participants expressed feelings of motivation and aspiration in the postnatal interviews, moving on from the prediction of fantasy constructions of life pre-birth to the reality of having a baby and the motivation to achieve and succeed for a better future for their infant. All participants talked of aspirations for the future, of what being a mother meant to them and their future, being responsible and giving them purpose,

'Erm... I don't know, it's all dependent really, it sort of gives me motivation. To study and to get, you know, go far, go further in life...'
(Sophia, 16: IV 2)

'I feel quite happy, but also quite excited, because, I've got the college sorted, so it's like, I'm excited to see what I'm going to be like in the future and where it's gonna all progress. I wanna move out soon, so I think, as soon as I've got college out of the way, I'm gonna try and do work on the days I'm not at college, save up some money, then just get a little flat or something.'
(Sophia, 16: IV 3)

'Yeah, I'm doing a dual accountancy apprenticeship, so yes, definitely I'm going back to that. I've passed my first level, so I've got two more levels of AAT then I'm qualified with that, so... I want to get it all done now quickly for her. [does having a baby motivate you?] Yeah, 100%. I don't even think of me now, I just think of her'
(Ruby, 18: IV 2)

'I knew quite a lot 'cos I want to work with children, I'm going to uni to be a primary school teacher'
(Evie, 19: IV 1)

'Hairdressing. Can't wait. Well, I'm doing that for a year, and then, my aunty owns her own hairdressing, but that's in X, and my dad lives there, so, she's said she'll train me up, and I can work for her.'
(Mia, 16: IV 2)

While Mia was aspirational and excited for her future, she was the only participant who expressed wishing she had waited to have a baby until her life was more established,

'Erm, I like being a mum, but... I don't regret it, but I wish I'd had him later. Where I've had like a job and obviously like got my own little house and have a little family, erm, but I don't really regret it, at all'
(Mia, 16: IV 2)

Mia is conflicted here, she is expressing some regret but is aware that she cannot change the situation, and does enjoy aspects of motherhood, but in retrospect, she could have been better prepared if she had waited to become a mother. Participants in the main expressed that the early stages of motherhood were challenging, but overall, they enjoyed their new role as mothers, however as

infants got older and more interactive, this was mentioned by all participants to be a more rewarding aspect of motherhood from their perspective.

6.2.2 Role of mother

The role of motherhood as a theme could be subdivided into *the work of motherhood* and *wanting validation* and external acknowledgement that they were good mothers. A negative aspect that was mentioned by three participants was that of *public perception* or reaction to their pregnancy and young motherhood status.

Work of motherhood

'It's a bit stressful, it is a lot of hard work, and at times you'll be really cranky, but, honestly, it's been the four best weeks of my life. So, I wouldn't change it for the world. [laughs]'

'Some days it's like, some days, I have no idea. He's like, such a crier at night and it's like I don't know what to do, I've done this, I've done that, I've done everything, what do I do? But, it's just he wants to be held.'

(Sophia, 16: IV 2)

'And then, I like, clean up all his nappies from the night, and then wash his bottles and normal stuff, all the boring stuff. Like, changing his nappy. And then don't know really, I just find everything boring [laughs]. [why is that?] Erm... like 'cos he can't speak to you and like, he cries and you're like 'I don't know what to do, tell me what you want' and you have to figure it out and it's pretty boring.'

'Erm.. maybe like when he cries, and you do everything, but he's still crying, and that's really hard. 'Cos you're like, 'I don't know what you want but you need something'. And then you are just trying to like, cuddle him til he stops, and he can go on for hours and hours. And when he finally stops, you're like yes! And you put him down and then he starts again.'

(Mia, 16: IV 2)

For Mia and Sophia, the work of motherhood was described as hard work, boring frustrating and relentless. However, for Evie and Ruby, they viewed the transition to motherhood as easier than expected, a natural evolution. All participants talked about the challenges of identifying what the infant wanted, but Evie and Ruby expressed being more confident in their ability to step up to the role of

motherhood; perhaps suggesting that their expectations and coping strategies were better developed,

'It's alright, I thought, d' you know I find that weird, 'cos like I don't think it's that difficult, but like, I have my mum around to help but she like helps when I'm tired and stuff, but I don't think it's that difficult to be fair. But then I don't know if that's 'cos I've got a really well-behaved child. I mean if she was a screamer, then it would probably be different, but she's not, so I think it's quite easy. [Is it what you expected?] Erm... I dunno, I'm gonna say no, but that's because I thought like, again it's all about the screaming, 'cos I thought she'd be screaming the place down and she wouldn't sleep, and she wouldn't do this, and she wouldn't do that, but ever since she was born, like, she's slept for at least 3 hours at a time, which is quite good' (Evie, 19: IV 2)

'she doesn't really do a lot, so it's quite, so it is different, I thought it was going to be a lot, a lot more hard than it actually is, I just think it's been quite easy. Nights are a bit hard, but in the day and stuff it's easy, like I'm, I get bored, I want to start doing things' (Evie, 19: IV 2)

'[how do you feel about being a mum?] I just kinda like, I didn't kinda change anything, I just kinda like went along with it, I don't know, it just happened naturally...' (Ruby, 18: IV 2)

My interpretation of the younger participants' experience was one of being trapped in their bedroom with this new baby. Therefore, they balanced the hard work with little rewards such as a smile, or the enjoyment of bath-time; whereas, the older participants seemed to be able to integrate motherhood into their life more easily, with both Evie and Ruby describing their babies as 'good' and 'well-behaved'.

'I've not really got a lot to say 'cos she's so well behaved. I can't moan about her, she's perfect, like even in the night like when she's awake for a little bit, it's not even bad 'cos she doesn't make a scene, and so it's like I can't even be mad at her though she's kept me awake. And to be fair I can't even be mean about her she's too good. She is very good, I'm very lucky to have such a good baby.' (Evie, 19: IV 2)

'She's an angel, all she does is eats and sleeps and that's it, and poos [laughs]'
(Ruby, 18: IV 2)

Although participants had differing perspectives on the work of motherhood, it was important to all of them that they were seen as good mothers and to be doing the right thing. They wanted to be taken seriously as an adult and as a mother who knew what they were doing.

Validation and expertise

All participants used language that portrayed them as experts on their baby. Some participants expressed it more eloquently, but for all, it was important that they were perceived as good mothers by both their close friends and family and the external world,

'I'm the one with the oldest baby, so it's like questions everywhere [Laughs]. I'm like the agony aunt of the group. [laughs]. [how does that make your feel?] Makes me feel well proud of myself [laughs]. (Sophia, 16: IV 3)

'They [older brother and partner, 25 yrs] came to me for advice. [how did that make you feel?] it's a bit weird, 'cos they're erm... because of her being a bit older, but yeah, yes, they came to me for advice, about like, they'd ring me like 'how shall we dress him to go out, is he OK in a sleep suit?', and I'm like 'oh, god no, it's freezing.' (Evie, 19: IV 3)

Both Sophia and Evie seemed to value this position of perhaps knowing a bit more, or at least to have some prior experience and being in a position to offer advice to others or talk with some authority on a given subject. For Sophia, this helped to identify a place in her new friendship group, one of 'agony aunt'; whereas, for Evie, as the confessed 'baby' of the family, this is perhaps a marker for her and her family members to acknowledge that she is growing up and can make a valid contribution to parenting discussions. Evie was also vocal about an event where she felt her opinion as a mother was being questioned, but she knew her baby better than anyone, including her mother and the doctors, and persisted in getting

her baby medical attention. In this quotation, Evie is vindicated with her concern and persistence,

'...so, I kept taking her to the doctors and they kept saying she was fine and the next day I took her in, she had a chest infection, so I said she hasn't developed a chest infection over-night, so then she started, her breathing started to get really bad on Saturday, so I managed to get an appointment at the walk-in centre, took her there then they rushed her to hospital in an ambulance. They thought she had sepsis. Got there, and she wasn't breathing properly, and they put her on an oxygen tank, and she wouldn't eat so she had to be tube fed and turned out she had bronchitis with a chest infection'
'... everyone thought she was getting better, but obviously I just knew that was wrong'
(Evie, 19: IV 3)

Evie was self-assured in her mothering skills and wants to be taken seriously. Conversely, some events reveal her teenage attitude when caring for her infant. Evie talks about being the only one who can settle the baby easily and quickly, but acknowledges that there are times when the infant 'doesn't know what she wants'; so, Evie's perspective is that when she settles easily, it's down to her mothering skills, however, when there is a departure, then the infant is to blame,

'but then she does have, she has had a couple of days when she doesn't, she can't make out what she wants, she can't make out whether she wants food, a nappy change or just a bit of love so it can take a little longer for that.'
(Evie, 19: IV 2)

There are further glimpses of this 'teen attitude', which are explored in the following chapters, which serve to illustrate the tension for these young women in moving between the worlds of adolescence to adult and motherhood.

Public perception

This issue appeared discretely in some of the participant accounts, from Grace feeling unable to express feeling good about being pregnant, to Evie thinking about what her infant should wear when out in public so as not to appear 'tacky',

'my boyfriend, he likes to shove her in a sleep suit 'cos they're easy, but I try and put her in normal clothes because then, 'cos obviously if you are taking her out then I don't want to put her in a sleep suit, 'cos then it just looks, it looks a bit tacky, [laughs] so I try and put her in normal clothes'

(Evie, 19: IV 2)

to this candid quotation from Mia,

'And like some people, like sometimes like, do you know, like, when you're on the bus or something, I feel like people like, look at you, you get that look, and they're like, they are judgemental, a bit like, I'm, I've took on being a mum and how can you judge me, for like, being, like doing that? [Yeah]. Which I just don't understand it. [how does that make you feel?] Like, a bit, like upset, but then I don't really care at the same time, 'cos I've still got that beautiful boy out of it... so... [Do you feel you've got to be more resilient, maybe better if you are young?] Yeah. Definitely. It's not fair really.'

(Mia, 16: IV 2)

These undertones of disapproval are a feature of the young mother's experience of motherhood, perhaps of not being worthy, and feelings that both professionals and the public expect them to fail at this important role. Evie's almost 'throw away' comment is equally important, it shouts 'it is important what people think, people are judging you as a young mother'.

Within this subordinate theme of *'becoming a mum'*, the reality of having a baby changed the perspective for participants; they now had something tangible to focus on and a reason to underpin the required changes in their adolescent lives. Participants expressed both positive and negative aspects of becoming mothers, but in the main this was a positive life event for them, engendering aspiration and a new sense of purpose for them; however, they did feel increased scrutiny from external sources and were eager to present as good mothers and be seen to be doing the right thing. Although participants were now mothers, there was a continued undercurrent of ongoing change and 'tension' involving their identity, between being an adolescent and being a mother, and within their relationships.

They required acknowledgement and validation as mothers but struggled to be accepted as such by their parents.

6.3 Relationships

Relationships emerged as a theme for all participants across all interviews. From having to tell their partners and parent/s about being pregnant and coping with their differing reactions, which were expected to be those of disappointment and disapproval, to the changing relationships with their peers and the impact that pregnancy had on these fledgling relationships, to negotiating a range of generally superficial relationships with professionals. Peer relationships have been mentioned earlier in this section and aspects of relationships with professionals will be explored in more detail in the following chapters. In this section, some insights into the participants' perspectives on relationships with partners and family are shared.

6.3.1 Partner

Participants talked very little about their partners unless prompted. This could be a marker for the significance of the relationship, particularly for Sophia and Mia who did not continue in these relationships after their babies were born. Both Mia and Sophia stated that they were ambivalent about their own relationships but were disappointed about the lack of relationship between father and child. However, both of these young women were able to offer thoughts on why they felt there was a break down in the father-baby relationship, putting this down to a lack of connection with the baby, immaturity and that the fathers looked upon the parenting role as a choice.

'He doesn't wanna know. My friend sent him pictures over Face Book of him, but he wrote he ignored it. [how does that make you feel?] Well, at first it was like, I genuinely felt quite sorry for him. And a bit like, gutted, because, it's like he's missing out on him. But, now, it's like, it's his own fault and yeah, he's scared, but so was I. And I still did it, so... [what's he scared of?] Being a parent, having a responsibility'
(Sophia, 16: IV 2)

However, although Sophia tries to present as ambivalent about her relationship, her use of language like ‘feeling sorry’ and ‘feeling gutted’, seems to refer to her feelings of sadness and loss of her relationship and conveys some frustration of the lack of maturity in her partner to take responsibility as a parent, as if it is a choice. Mia, on the other hand, tries to take back some control by stating she had split up with her partner, even though he already had a new girlfriend by the end of Mia’s pregnancy.

‘Well, he did, he started to see him, and then erm... he got a girlfriend [laughs]. And ‘cos, well, ‘cos he wanted to get back with me and I didn’t want to get back with him. But I said I wanted him to be like in his life, so he could see him, or I’d meet him, and I feel it was like, most days of the week. And then he got a girlfriend and he was like, ‘that’s it, I don’t want to see him anymore’.

(Mia, 16: IV 2)

And, this second quotation relays her frustration at the lack of maturity in her boyfriend,

‘And obviously they’ve not carried, they’ve not carried him for 9 months and obviously, not had that time to mature, like, obviously when I was first pregnant, I was like, I need to like, get everything sorted. [Yeah]. Where they’re like ‘oh yeah, she’s pregnant and.... I’m gonna have a baby at the end of this’ that’s it. [Did it make you grow up?] Yeah. Too much [laughs].’

(Mia, 16: IV 2)

Sophia and Mia have had to grow up quickly; they have become mothers and are aware of their responsibilities in contrast to these fathers who were able to walk away from this ‘scary’ responsibility. Sophia and Mia did not have a choice to walk away; they faced up to their responsibilities and feel proud to be mothers. This illustrates the changes they have undergone, in contrast to the fathers, who remain living their lives as adolescents. However, Mia also expresses in the last quotation, that having a baby ‘made her grow up too much’; perhaps suggesting that she wasn’t ready for such a big step towards adulthood at just 16 years old, and in having to grow up, she has lost whom she was becoming as an adolescent.

Mia had also struggled with making new friends and settling into her new school. Having a baby for Mia had a significant 'cost', the resultant changes had isolated her from her 'old friends' and taken its toll on her relationship. Mia was the only participant who admitted that she wished she had waited until she was older to have a baby.

Evie and Ruby continued with their long-term relationships but again did not talk about their partners unless prompted. Evie seems to undermine the efforts of her partner and will not allow him to help, giving the excuse that it would be 'cruel' to expect him to provide infant-care when he is not used to doing it, but also that this would unsettle the infant because she is not used to anyone else providing care,

'He stays over here about two or three times a week. Erm.. and when he stays over, he'll normally go 'I'll do all the feeds' and I'll go 'no, it's cruel, like you're not used to it' so I'll do it. He sees her every day obviously, she's the apple of his eye so he loves to see her, more than he likes to see me. If I wasn't even there, he probably wouldn't even notice, that's just normal though so yeah, he comes round'
(Evie, 19: IV 3)

Evie uses her mother 'role' to subtly control the relationship between herself and her partner. My interpretation is that Evie does not want to acknowledge that someone else could provide care for her infant as she does; and Evie prioritises, and gives almost all of her time to the infant, perhaps side-lining her relationship.

'when my boyfriend stays, her dad and her, he does the feeds in the night, she's a bit agitated 'cos she's always used to me'
(Evie, 19: IV 3)

'Like sometimes I wish, like I think, me and my boyfriend could have some alone time but then again, I do love always being with her, and she's no trouble.'
(Evie, 19: IV 3)

These quotations illustrate some of the changes happening within Evie's relationship with her partner. So, not only are there significant changes as participants negotiate the path between adolescence to adult and motherhood,

but there may be collateral damage to significant relationships along the way if they are not able to manage the transition and balance these competing priorities effectively, which is a lot to ask of an adolescent.

6.3.2 Family

During the interviews, occasionally family members would make a comment or have something to add to the conversation or would question what the participant was saying. While I have endeavoured to stay close to the participant narrative, I have included or referred to comments made by grandparents which appear relevant to the topic under discussion.

Family relationships were generally a good source of support for the participants; however, they were also a source of tension. Evie had expressed how her mother had helped and supported her when finding out she was pregnant but was anxious about telling her dad,

'I did have to tell my mum and then she told my dad even though I told her not to, but she said I needed the support, so after a while I tried not to get annoyed. They were very supportive, at the start, I was like this is going to ruin my life, then my mum sat me down and she was like it doesn't need to ruin your life, and they were like so supportive.'
(Evie, 19: IV 1)

Evie also expected that her parents would be there to continue to support her financially and with infant-care. Ruby was of a similar opinion, also drawing support from her extended family, several cousins had recently had babies, offering a 'role modelling' advisory role which is discussed in chapter eight.

'Because of like, obviously like with cousins and stuff, I don't know I didn't I didn't, when she come, I didn't think 'oh my god what do I need to do', I just, I just knew to do that kind of stuff, it must have been from seeing my family members and stuff with their babies'
(Ruby, 18: IV 2)

'[my mum in Ireland, she's got like 35 grandkids.... She's been on the phone constantly to her you know – granddad interjects] Yeah, I've had so much support'
(Ruby, 18: IV 2)

Sophia had a close relationship with both her dad and nan (Sophia's grandmother); however, she had no contact with her mother. Sophia instead described a close relationship with her nan and aunty, who appeared to be 'mother figures' for her, but Sophia also developed a close relationship with her family nurse, who may have provided a 'mother figure' for Sophia.

'My nan, because at night if I can't get him back to sleep, or I'm getting like stressed or worried, then she just comes downstairs, she just comes downstairs routinely like every night to make sure I'm OK. [what if your nan wasn't here?] I'd be lost, I wouldn't have half a clue what I'm doing....'

(Sophia, 16: IV 2)

In Sophia's relationship with her dad, there was no expectation he would be offering infant-care support or advice, but she valued this relationship differently; there was affirmation that he accepted her more as an adult. Sophia had taken on a child-care role with her younger siblings when her mother left home, so perhaps due to family circumstances, Sophia's dad viewed her more readily in an adult role. Sophia also valued the opportunity to preserve her pre-pregnant identity, in that they would smoke together, and perhaps that was the underlying reason why smoking was so difficult for Sophia to give up.

'[Has your dad been helpful?] Sometimes, like, I'll just pass him when I need to make a bottle, but he's like 'I always get him when he's crying, he doesn't love me', I'm like he does love you he's just crying 'cos he's hungry. [Laughs]. So, he's a bit of a drama queen with it.'

(Sophia, 16: IV 2)

'[where do you smoke?] Outside. In the back garden.. I sometimes go out with them [dad and nan], it depends what I'm doing.'

(Sophia, 16: IV 3)

When help undermines

Occasionally participants spoke of tension within close relationships when help and advice were perceived as intrusive and undermining. Mia appeared to have a particularly abrasive relationship with her mother. Mia felt able to challenge sometimes but not always, and other times her mother would take over infant-care which was a source of frustration for Mia.

'Erm.. like night feeds, say if she's not working, like after, then, she'll get up and like feed him. She won't wake me up, she'll just get up and feed him. [OK]. And I'm like. I'll wake up and think 'oh my god, he's slept all night' and my mum is like, 'no, I fed him' and I'm like 'oh, ok' [sounded disappointed].'
(Mia, 16: IV 2)

'Like, L's got like a really em, gunky eye sometimes, and the doctor told me to use boiled water with salt. And my mum was like, 'no you can use boiled milk'. But I said 'no, I'm not doing that', but she does it when I'm not there anyway. [How does that make you feel?] I don't know. Well, if it helps then, fine I guess, but... I don't know. [Do you feel confident to challenge her?] Yeah, and tell her, let me just do what I'm doing. She's like, 'ok, whatever'.'
(Mia, 16: IV 2)

Equally, Mia's mother was not respecting her daughter's opinion on infant-care, over-ruling or responding with an equally unhelpful retort – although this is reported from Mia's perspective, the message is clear that she feels undermined and not taken seriously as the mother of her baby. The style of communication between mother and daughter reverts to that reminiscent of the adolescent relationship, where the parent knows best.

'My mum, sometimes she tells me to do this and I'm like 'mum, I know what I'm doing, just leave me alone'.'
(Mia, 16: IV 2)

Sophia was more receptive to being shown what to do; however, this was not within the mother-daughter relationship, which during adolescence can be more difficult to negotiate for both parties.

'Erm... my uncle and auntie, they're quite good, because, erm... he wouldn't, what wouldn't he do?... He wouldn't do something, and then my auntie just took over, took over and said just do this, look this works, and it was fine, so that was ok.'
(Sophia, 16: IV 2)

Accepting advice and support from close family will be further explored in the following chapters, but this section serves to illustrate the importance of and change within, relationships during this transitional period for these young mothers. As Evie states,

'I'm living here with my mum, dad and my brother. So, got all the help, but I wouldn't move out anyway 'cos I'm bit of like erm... I'm glad I've got my mum there, so I know she'll help me, you know she's had four children, so she like knows what she's doing, and I think I need that help'
(Evie, 19: IV 1)

She might be a mother, but she is still an adolescent for now, why would she move out?

The subordinate theme of *'relationships'* provides a continuous thread through all the previous emergent themes and illustrates the influence and impact these different relationships have. From disclosure of the pregnancy to family and friends, support and preparation for motherhood, engagement with professionals, the changing nature of peer relationships to the impact on significant relationships. Relationships are an important constituent of adolescent development, they are key to developing an identity, and peer, including exploration of sexual relationships, are particularly important. Conversely, relationships with family, particularly parents, can be perceived as a source of tension. All these elements have been explored by the participants here, illustrating the turmoil of change in peer and partner relationships, to

experiencing parents as both supportive through to interfering and undermining. From this data, the over-riding impression is that both these adolescent young women and their parents are struggling with this transition to adulthood, compounded by the arrival of a baby into the mix.

6.4 Chapter Summary

In this chapter, I have presented the superordinate theme of *transition* and the subordinate and emergent themes that converge under this umbrella. The primary research question aimed to understand the lived experience of young women through the process of pregnancy and becoming mothers. Primarily, these young women are adolescents, and are embroiled in this developmental stage; superimposed on this, is their unexpected journey to motherhood. Their accounts reveal emotional turmoil and disconnection but is followed by a future of purpose, aspiration and taking on the role of motherhood with all that that entails. However, there was some tension between wanting and needing to grow up and resisting the move into independent adulthood, and their parents were complicit in this 'postponement' of moving into adulthood. There continues to be a co-dependence between adolescent and parent, and both parties need to re-negotiate their roles and boundaries. Parents, as illustrated, find it difficult to acknowledge, or allow their daughters to grow up, but the young women themselves find it difficult to move towards being an independent adult. This is a piece-meal process, where time and experience are required to re-negotiate these relationships. There is a sense that this transition will continue for several years to come for these young women and their families.

The participants shared their experiences with me, and the emergent and subordinate themes were born out of their accounts. By using their narrative to illustrate the emergent themes, I intended to capture this experience and to share with the reader, my interpretation of what life is like for these young women. This chapter, presenting the theme of *transition*, provides the context, or lens, through which to examine the secondary research questions. The following chapters explore the superordinate themes of '*information*' and '*fractured application*', both of which relate to the secondary research questions of:

- What do mothers understand about what constitutes safe sleep? and
- What influences decision-making around infant care practices related to the sleep environment?

CHAPTER 7. FINDINGS: THE CONSTRUCTION OF KNOWLEDGE

'Oh, you should feed him solid foods now'. No, I shouldn't feed him solid foods right now, read the, read the leaflet. Erm.. 'put him on his side', I was like, I can't put him on his side to go to sleep 'cos its dangerous. 'Yeah, but we used to do it in my day', and I was like, that's your day, dinosaurs were around then nan.'
(Sophia, 16: IV 3)

7.0 Introduction

One of the main objectives of this thesis was to identify young mothers' perceptions and understanding of behaviour and infant-care practices that increase the risk of SIDS. As such, this objective can be divided into two components, first, information and knowledge, and second, application. Information is crucial in shaping young mothers' knowledge and influencing understanding and potentially their decision-making related to infant-care practices. Information and advice, in a variety of guises, was raised by participants and highlighted this as an important theme. Within this theme, a number of issues were explored, such as participants' knowledge and awareness of SIDS risk factors, sources and reliability of information, information delivery method, medium and timing, and relevance and retention of key messages. All participants had some awareness about the risk factors for SIDS; however, SIDS was never mentioned explicitly by participants. In this chapter, the subordinate themes are presented together to illustrate both sides of the 'information' coin, the '*good and bad*' elements of specific topics of information and advice as experienced by the participants. The '*dinosaur*', mentioned with humour in Sophia's opening quotation, has been used to symbolise outdated and unsafe information and advice that the participants described, and as such should be 'extinct'.

This theme sits neatly between the previous theme of *transition* and the following theme of *fractured application*; '*transition*' sets the context for these young mothers and the perspective from which they gather and process information and

make decisions. The following theme, and the second component of the study objective, *fractured application*, illustrates the challenges for participants in consistently applying that knowledge during the early postnatal period and how they adapted and modified information to suit their needs as the infant aged.

Table 7.1: The Construction of Knowledge – emergent themes

Emergent Theme	Subordinate Theme
Knowledge Delivery <ul style="list-style-type: none"> • Method • Medium • Timing Relevance Relationship with professionals	Good Information
Inconsistent Confusing Outdated advice – ‘the dinosaur’ Irrelevant Delivery <ul style="list-style-type: none"> • Method/ Medium/ Timing <ul style="list-style-type: none"> ○ Burdensome ○ Overwhelming ○ Experienced as ‘telling’ ○ Not explained 	Bad Information

7.1 Knowledge

All participants had some, and varying degrees of knowledge and awareness of behaviour and infant-care practices that increase the risk for SIDS; however, they were on occasion, unable to identify where this knowledge/ awareness had originated or always provide a sound rationale for their behaviour and practice. Interestingly, none of the participants ever mentioned SIDS explicitly when talking about behaviour change and decision-making during pregnancy, or as applied to the infant sleep environment. They did, however, acknowledge the risks of bedsharing and the possibility of accidentally rolling onto the infant and squashing or suffocating them during sleep. Other infant-care practices were primarily associated with convenience, such as pacifier use, sleeping in the same room as the infant and keeping the infant nearby during the day.

7.1.1 Behaviour

All participants were able to cite at least one benefit of breastfeeding,

'Yes, it reduces the risk of breast cancer, it's good for the development of the baby's brain and it's erm... it's good for their stomach and it helps them grow better and...'
(Grace, 17: IV 1)

'Erm... better nutrients I think and something to do with like, erm... what's the word?... you know from the air, the.... Erm the... [immunity] Oh, yes, I can't say the word [laughs] that's it... oh, and it's cheaper [laughs].'
(Mia, 16: IV 1)

'Erm... just because it's good for her really, all the goodness and stuff, yeah I just wanted to do it.'
(Ruby, 18: IV 1)

Although their rationale was weak, the clear message they communicated during the antenatal period was that breastfeeding was 'best for their baby' and they wanted to do what was best; all participants stated they intended to breastfeed. While those who smoked were able to identify that smoking was harmful during pregnancy, Grace, Mia and Evie stated they gave up smoking once they found out they were pregnant, they considered themselves to be light smokers and found it easy to quit,

'I was [smoking] before I was 2 months [you just stopped?] Stopped. Yeah. I knew it was hurting her [baby] [why is that?] Well I wasn't a heavy smoker anyway, I'd only be smoking about 3 – 5 a day, I'd before... there's just no point in smoking. [Do you know about the risks of smoking?] It's harmful to a baby or a child.... 'cos of passive smoke, it gets into them'
(Grace, 17: IV 1)

Sophia however, had tried to quit during pregnancy but had found it very difficult,

'It's hard, I've tried, just can't do it. Tried vaping, patches, those nicotine pills, nothing works. I've cut down [from] 7, now I'm down to 3. [why did you decide to cut down?] For the health benefits for the baby, I wanted to stop but cutting down is less harmful than 7. [What do you know about the risks of smoking?] The baby gets less oxygen for the 20 minutes after a cigarette, [thinks] small, don't grow, erm.... and there's a chemical that affects... erm... [thinks] the brain?'
(Sophia, 16: IV 1)

So, although Sophia could identify some of the harmful effects of continuing to smoke, she appeared to minimise these effects by highlighting the benefits of cutting down and manipulated the information to suit her world view to continue to smoke, albeit at a reduced level. Although the number of cigarettes she stated that she smoked varied at each interview, and she joked about her intentions for the postnatal period,

'[What do you think you will do after the baby comes?] [laughs] probably won't have time to smoke!'
(Sophia, 16: IV 1)

My interpretation was that Sophia had no intention of giving up smoking; demonstrated by her reluctance to persevere with any of the cessation interventions and her deflection of the subject when raised. This was an activity she seemed to enjoy and could share with her dad, and postnatally, this activity appeared to serve two functions: it provided 'me time' for Sophia, away from the baby, perhaps helping to preserve her pre-baby identity; and secondly, it reinforced her adult status and her social relationship with her dad. Sophia was aware that her lack of commitment to quit smoking is not socially acceptable, so to offset criticism, she engaged in a number of half-hearted 'attempts' to quit, as illustrated in her ambivalence towards nicotine patches in this quotation:

'[Are you still trying to quit?] I've got nicotine patches, I don't know, they feel really weird the first time you put them, but I dunno, they seem to be working, so let's go with it. [Laughs.] [Do you use them every day?] Every other day. 'Cos, they itch my skin quite a lot.' (Sophia, 16: IV 3)

Sophia was generally uncomfortable talking about her smoking habits. She did not raise the subject spontaneously, and when she was asked about smoking, her body language and short, sometimes evasive or humorous responses illustrated that she was aware that this practice was not socially acceptable during pregnancy. Despite my efforts to encourage her to talk openly about smoking, further exploration was difficult.

All participants were generally aware of maintaining a smoke-free environment during pregnancy and after birth, citing measures they would take to reduce smoke exposure. Each family had at least one resident smoker, who was reported to smoke outside, some were reported to clean their teeth and wash their hands and wait for a period of time before handling the infant, all in line with current advice.

'[What do you do about your mum smoking around L?] She goes in the garden. [And what about handling the baby after she has smoked?] Erm... well, I let, I tell her to wash her hands, well, she don't, she lets it go for half an hour, and then she washes her hands, that's it really.' (Mia, 16: IV 2)

[Does your partner smoke?] Yes, I tell him he's gotta smoke outside [laughs] Erm, it... it says like you have to brush your teeth and wash your hands and stuff before you touch the baby [Do you know why that is?] The passive smoke and the chemicals. (Grace, 17: IV 1)

The messages regarding breastfeeding, smoking and achieving a smoke-free environment for the infant were generally well understood, although recollection of the rationale of benefits and harms were weak, or a little 'adapted' to suit the

circumstances of these young mothers. Even so, participants had some awareness, possibly due to constant reminders during antenatal appointments and a generally increased cultural awareness of these factors in pregnancy.

7.1.2 Safe sleep awareness

Safe sleep awareness was more variable between all the participants. They generally identified four key elements of safe sleep across all interview time points, which included 1. placing the infant on their back for sleep, 2. feet to the foot of the cot, 3. bedding should be securely tucked in and not covering the face, and 4. prevent overheating the infant by over-wrapping or using too many clothes. Each of these safe sleep messages was described in relation to the cot and night time sleep unless they were prompted with alternative sleep contexts. This 'cot-centric' focus is an important issue which will be discussed in the next chapter.

'[what do you know about safe sleep?] Erm, not much really... Erm... making sure that the blankets aren't over their face.... [thinks] erm... and they are not overheating'
(Grace, 17: IV 1)

'Feet at the end of the cot, take all of her toys out, tuck the blanket right underneath so she can't pull it over her face.'
(Evie, 19: IV 3)

'Erm.... Temperature has to be right, sleep them on the back and when they're on their back you need to turn their heads to the side to keep the shape, erm... that's it. Get a thermometer, get one that you can put on the wall or something, so that'll tell you what the temperature is... erm... not too many [blankets] wrapped around [laughs]'
(Mia, 16: IV 1)

'Like, putting her at the end of the cot and stuff like that, that's and obviously not sleeping in my bed with her, just little things like that, I just knew not to do. And obviously not too much in the bed with where she's sleeping, but they just confirmed it all when they told me, so I don't know, but I didn't get told anything about it before she'd come.'
(Ruby, 18: IV 2)

'[How do you put him down?] Back. [Do you always do that?] Yeah. Because he has to be on his back with his feet touching the end of the crib.'
(Sophia, 16: IV 2)

'[What position do you put her down in?] on her back [did the midwives tell you that?] I just done that anyway, no one ever told me, but I'd just naturally do it.'
(Ruby, 18: IV 2)

Having the infant in the same room in their cot was also identified by all participants. Other than convenience and being told to do this, participants could not explain why this was recommended and did not explicitly consider this as being a protective factor for SIDS.

'[Where will your baby sleep?] With me, by the bed, but not in the bed with me. [How did you decide that?] Well, it's just easier, and babies should be next to their mum, to feed and stuff. [So why wouldn't you have the baby in bed with you?] In case you roll on them and squish them. [Any other reasons that you know about?] Hmm, not really.'

(Sophia, 16: IV 1)

'That you need to have the baby in the same room as you until they are about 6 months, but, [why is that?] well it's up to you until you think your baby's ready, erm... and hopefully he'll be able to stay in the Moses basket all that time and won't grow out [laughs]'

(Mia, 16: IV 1)

'She's sleeping in a Moses basket in my room. [why is she in your room?] Just because, they... you're not allowed to leave them on their own anyway for six months, are you?'

(Ruby, 18: IV 2)

Only Evie alluded to the possibility of SIDS, stating 'if anything happens' as a reason she wanted her infant close, but mainly the impression was for convenience,

'She will sleep in the room with me, only because it's not like, we have a spare room anyway and she can sleep in there, but I just feel I'd rather she was close to me just in case she needs me, or anything happens I'm literally right by her side and I have quite a big room anyway, so sleeping with me I think and having her close so I'll be checking her, giving her a poke in the night [Laughs]'

(Evie, 19: IV 1)

When asked about their thoughts on co-sleeping, all participants readily identified this practice as increasing the risk of harm to the infant but still did not explicitly mention the risk of SIDS. Antenatally, participants stated they did not intend to bed share. However, in the postnatal interviews, participants acknowledged that accidental bedsharing was more likely, and Sophia and Mia had both fallen asleep

with their infants in bed with them. Both Mia and Sophia changed to bottle feeding within the first two postnatal days, whereas Evie stated she persisted with breastfeeding for two weeks, although she was expressing and feeding by bottle for the majority of those weeks, therefore any breastfeeding and co-sleeping related advice should not have influenced bedsharing.

"Cos it's a risk for them of getting squashed and rolling on top of them. Well, if she's lying in bed with me asleep and I'm awake that's different, but not to fall asleep"
(Grace, 17: IV 1)

'[would you have the baby in bed with you?] No, [laughs] I'd, just 'cos I'd be worried in case I squish him or something. Yeah... I wouldn't want to just fall asleep'
(Mia, 16: IV 1)

'[Have you had her in your bed?] No, not yet, the only time, I'm not gonna lie, is when I'm feeding her, I can feel my eyes starting to go then I normally turn the light, then once the light is on, I can't get back to sleep. But no, I haven't fell asleep with her yet, I know it's very easy to fall asleep with them, and I know it's very dangerous to fall asleep with them, but I feel like you are going to fall asleep at least once, it's very easy, but no, not yet.'
(Evie, 19: IV 2)

[have you fallen asleep with him?] Yeah. My mum, sometimes like in the morning, if I've done it, she comes in, and she'll take him off me and puts him in [the cot]. 'Cos she always tells me 'don't do it'. Yeah, 'cos he's warm and you're warm and you are keeping each other warm. [Have you thought about things you can do to prevent that?] No, not really.'
(Mia, 16: IV 2)

'[Have you had him in bed with you since last time?] No, I think the last time I scared myself out of it. [Does this cot help? 3-side cot] Yeah, I think it does a lot 'cos I can just lean over, whereas, I had to like, get up and get over. And then if I was tired and he wouldn't sleep, I'd just put him there. 'Cos then I thought at least he's not, there's not a chance of it [co-sleeping]'
(Sophia, 16: IV 3)

Both Sophia and Evie employed some sort of prevention strategy; Evie turned on her light and Sophia used a three-sided cot at her bedside to prevent future episodes of accidental co-sleeping. Mia, in contrast, had not thought how she might prevent this, and her comment above, containing the language of 'sometimes' and 'always', suggests that unintentional co-sleeping with her infant

may be a more regular occurrence for her, even though she was aware of the risk and received reminders from her mum not to do it.

Although all participants appeared to have some awareness of some of the current safe sleep recommendation; they were often unable to recall the source of that information reliably. This may be a positive reflection of a general trend indicating that safe sleep recommendations are becoming embedded in infant-care practice culture, but with this in mind, if information sources are unreliable, then outdated or unsafe practices can perpetuate, notably if the rationale to underpin the practice is lacking.

7.2 Sources of information

The origin of information is an important consideration regarding accuracy and safety. There are a plethora of sources of advice and information available related to pregnancy, infant-care practice and parenting which may perpetuate outdated and unsafe practice; or information without accurate explanation can be distorted or adapted to suit differing circumstances. The primary sources of information and advice for the participants were from health care professionals, close family members, particularly their mothers (and one grandmother – Sophia’s nan), who had had children, and peers (some of whom were also relatives), who had had similar experiences to themselves. Often the Internet was used to search for information, but the results were then either discounted or checked out with a ‘second opinion’ source. Identifying a source that they could trust was also important to them, and they were able to treat information from the Internet with some caution.

‘[Where could you get information?] ... the doctors, that’s it really, just the doctors. Erm, the doctors and the midwife.’
(Grace, 17: IV 1)

‘Erm... NHS, Google, doctors, nurse, midwife, K (family nurse) that’s it really’
(Mia, 16: IV 1)

‘Yeah, erm if I had like pains or anything, I like Google everything, which is not good, but [laughs] yeah, ‘cos if I had anything at the time I probably would Google or text [the midwife], but other than that there was no other information that I needed.’
(Ruby, 18: IV 1)

'[Would you trust information from Google?] Well, you read it and you get told you're gonna be dead or something in the next 15 minutes, but erm.. some things you can believe, and it just varies. I think you can kind of tell by yourself if they are over-reacting or over-exaggerating. [Would you check that information if you weren't sure?] I'd kind of just, if I read it and I believed it I would just go with what they said, if I read it and thought oh, that's a bit.. then I'd just, I'd kinda pretend I'd just didn't even ask the question.' (Ruby, 18: IV 1)

'I mean, obviously my midwife's information I probably trust the most because she's got loads of experience and my obstetrician. I think when I read stuff, I'm not sure what to trust and what not to, so I think I have been quite lucky that I get to see someone every week and speak to people really in the know, that's nice and I trust that. And I trust my mum's information 'cos obviously she's had 4 of us, so she must have some idea what she's doing. See, I read a lot of stuff on-line that I'm not too keen on, but then again like, I dunno, like I don't take in anything on-line 'cos you don't know who's wrote it. I like listen to more people who say it to me verbally like doctors, obstetricians and midwives, I've had them blabbering I tell you, for so long, so yeah, so just their information (Evie, 19: IV 1)

'Like friends, I would ask any of them. Like, I'm, like we're like friends where we can like, meet up for the babies. [Do you trust their advice?] Yeah. 'Cos they've been like, same, well they've been through like, what I'm going through now. So definitely, I trust them.' (Mia, 16: IV 2)

This quotation from Ruby reveals that she may not check out information, dependent on how 'believable' the information appeared; she relied on her own judgement. Both Ruby and Evie stated that they knew what they were doing, considered infant-care as easy and mostly common sense, and believed they had good infant-care knowledge already. Both were also keen to demonstrate they knew their babies well, and although they appeared to receive information graciously, made their own decisions.

'[Have you needed child-care advice?] Not really. I mean, I feel like it's just all common sense, it's all just come quite naturally, that sounds really like bad, but it is all just, perhaps it's like 'cos she's an easy baby to look after.' (Evie, 19: IV 3)

'My family's quite big and we've always like had little children around so I've never not been around children, so no-one really needed to tell me what was going to happen because I kind of just know already from being around others'
(Ruby, 18: IV 2)

Participants frequently stated, when asked about their rationale for specific actions or behaviour, that they were 'told' to do it or just knew what to do. This 'instruction' almost always originated from a trusted source; therefore, it was accepted as correct and followed without question.

'[Is there anything that you'll change about the Moses basket?] 'oh, the mattress [why is that?] 'Cos, I have to.... 'cos I've been told to [laughs] by the midwife. Erm, well she said a new born baby needs a new mattress'
(Mia, 16: IV 1)

*'I thought you just had to use blankets [How do you know that?] 'cos my mum told me'
'[while you have been pregnant have you had any information on safe sleep for baby?] No [shakes head] [So where have you got your information from?] From my mum'*
(Grace, 17: IV 1)

Ruby and Evie had difficulty explicitly identifying where their initial (pre-health professional information) safe sleep knowledge had come from, stating they 'just knew' what was required in the infant sleep environment,

'[how did you know about safe sleep?] I knew quite a lot 'cos I want to work with children, I'm going to uni to be a primary school teacher, so I knew quite a lot anyway, so yeah, em... I knew quite a lot and with regards to sleeping and stuff'
(Evie, 19: IV 1)

'[What position do you put her down in?] on her back [did the midwives tell you that?] I just done that anyway, no one ever told me, but I'd just naturally do it.'
(Ruby, 18: IV 2)

Ruby, however, cited her relatives who had recently had babies as a probable source of her information, through observing what they were doing, she accepted their infant-care practices as correct and informed, although this was not actively 'checked out' but was stated to be 'confirmed' by health care professionals after the birth of her baby.

'Safe sleep? No, I actually don't think I did [receive information] until she was actually here, then they [midwives] told me about it, but I kind of knew anyway. [How did you know?] Because of like, obviously like with cousins and stuff, I don't know, I didn't, I didn't, when she come, I didn't think 'oh my god what do I need to do', I just, I just knew to do that kind of stuff, it must have been from seeing my family members and stuff with their babies'

(Ruby, 18: IV 2)

All participants seemed to have a general awareness of safe sleep measures before receiving any formal information from professionals. While this hints at these practices becoming embedded in infant-care practice, there is the potential to adopt practices that are outdated and potentially unsafe unless the providence of that information can be verified. Participants stated that their infant sleep practices were 'confirmed' by health professionals, sometimes this contact was a number of days after the birth, and therefore sleep practices and behavioural habits were already being established.

7.2.1 Influential Relationships

Participants were recruited via the Family Nurse Partnership and the specialist teenage pregnancy midwives; therefore, these young women were identified as having extra need of service provision and received more contacts with a named midwife and/ or family nurse. Grace was the exception as she had poor engagement with the midwifery service which was illustrated by her minimal knowledge of current infant-care and safe sleep practices, as she relied almost wholly on her mother for advice and support. Mia and Sophia, as the youngest participants, readily identified their family nurse as a trusted source of information and advice; and Sophia, who had no contact with her mother, had a particularly

close relationship with her family nurse. Sophia was also close to her paternal grandmother (nan) and aunt who also provided support and advice, however, much of this well-intended advice was out of date and unsafe. Sophia had to balance information from these, sometimes conflicting sources; however, she was able to challenge outdated advice using the information provided to her by her family nurse.

'Obviously, I've got my family nurse, so, she helps with the advice bit. [And has she given you lots of advice?] Yeah definitely. And I've asked her loads of stuff. 'Cos at first I was like 'is that normal, is this normal, how do I do this, what if he does this.. Blah blah blah ... Laughs. [And have you got a good relationship with her?] Yeah. [Do you trust her advice?] Yeah.

[what if your nan wasn't here?] I'd be lost, I wouldn't have half a clue what I'm doing.... Google [laughs]'
(Sophia, 16: IV 2)

When trusted relationships were a feature of service provision, the decision-making processes for these young mothers were more likely to be underpinned by better information and supported both the challenge of outdated information and translation into practice. However, this was not always consistent as discussed further in the next chapter. Evie and Ruby were less inclined to engage with professionals after their babies were born, instead preferring to be left to their own devices, seeking professional advice and support when it was required, or more likely from their mothers and from within their extended families.

'[Have you seen any health professionals since last interview?] No, literally no-one. Apart from my health visitor, but that was when I was in hospital and she didn't come round to see, she just phoned to see if she was out. That's it, no-one has ever like phoned or sent any e-mails or anything. [How do you feel about that?] I feel alright, I think I'd rather people not, I mean, I guess it's a good sign, like that no-one's like wanting to know, wanting to keep on top of what's going on, and also, it's quite nice not having people constantly on your back, so I quite like it. I mean, some people would worry, but I love it. I like being left to my own devices, I mean she's fine, so as long as she's fine.'
(Evie, 19: IV 3)

Evie had diabetes and had been engaged with health monitoring and intervention for most of her teenage years, although she had a history of non-compliance. Evie was also closely monitored during her pregnancy, seeing a variety of professionals weekly. Although Evie valued this during pregnancy, once her baby was born, Evie had stated that she knew what she was doing and likely viewed intervention from health professionals as unnecessary or irrelevant.

As illustrated in this section, when a good relationship exists between the young women and a trusted health professional, the quality of information exchange is notable, whereas the minimal engagement with a health professional in Grace's story, requires identification of an alternative source of information. For both Evie and Ruby, they viewed their extended and supportive families as a source of information after their babies were born, valuing the professional as a source of information about pregnancy, but believing that once they had a baby, they were well able to provide infant-care without the need for external guidance.

In the next section, factors that may impact on how information is perceived and accepted is explored.

7.3 Information delivery

When participants were asked about the information they had received at each interview, they readily recalled information about smoking, healthy eating and infant feeding, both breast and bottle. They had to be prompted to recall other information such as recommendations for safe sleep. Ruby, Sophia, Mia and Grace could not recall formally receiving any safe sleep information antenatally, Evie stated she had had safe sleep information antenatally but was unable to identify details of the information specifically. All participants stated they sought advice mainly related to their pregnancy during the antenatal period rather than aspects of infant-care or preparation for motherhood.

7.3.1 Method, Medium, Timing & Relevance

The use of texting by professionals as a method of contact and providing information is commonplace and appears to be highly valued by participants, the midwifery team used this approach and was mentioned particularly by Ruby and Evie.

'Yeah, from the midwives, really helpful and supportive as well. All I used to do was text T [midwife], [every twinge is this normal? – granny interjects] it's so worrying as well, so I was just constantly, I've, the amount of text messages I've sent T about 'is this ok?' 'is this normal? It's just reassurance, they don't mind neither, it's just she's really nice [it's very good, isn't it? Very different from years ago, there was no mobile phones, so you had to wait for your appointment – granny] God, I'd have had a heart attack!'

(Ruby, 18: IV 1)

Ruby's constant need for immediate reassurance resonates with popular cultural expectation of instant information twenty-four hours a day. This generation has grown up with the expectation of instant gratification, and this is transferred to their engagement with professionals. Ruby's statement that she would have had a 'heart attack' if she had to wait for information is both comical in its overstatement, but also clearly demonstrates her perspective on information delivery. This may also be related to an adolescent approach to problem-solving and the lack of ability to wait until the next appointment.

Anecdotal information from the referral midwives suggest that their younger clients were more likely to text for an array of minor queries, and expected constant reassurance as compared to their older counterparts. Equally, midwives were aware that this texting behaviour fostered a trusting relationship and therefore they were happy to support this activity.

Participants valued information and viewed it as relevant when it was provided within the context of needing that information. Therefore, information provided antenatally about safe sleep was perceived as irrelevant for their situation at that time, and as a result, was discounted or not retained as necessary.

'I remember the information that I had during pregnancy, but, apart from like, apart from the bottle-feeding help and injections... that's, that's all I remember.'

(Sophia, 16: IV 2)

'[Would sleep information have been useful before she was born?] Erm... nah, because I'd have probably forgot anyway, so once she's here it was just better, yeah, you can actually put it into action. But it's all so overwhelming, you don't remember half of it, so yeah, I'm not bothered about that.'

(Ruby, 18: IV 2)

Verbal information and demonstration were also valued over the provision of leaflets for example. The conversational delivery of information allows for the identification of topics relevant to the individual and offers the opportunity to ask questions and can enhance understanding.

'I like listen to more people who say it to me verbally like doctors, obstetricians and midwives, I've had them blabbering I tell you, for so long, so yeah, so just their information.'

(Evie, 19: IV 1)

The use of leaflets was both positive and negative, depending on how they were provided. When time was taken to convey and explain the information within the leaflets verbally, this was valued over just the provision of leaflets. Sophia was empowered by information contained within the leaflets she was given, she was able to use them as evidence to challenge the well-intended, but out of date advice from her nan and aunt,

'[What sort of advice have you had that contradicts the leaflets?] Oh, you should feed him solid foods now. No, I shouldn't feed him solid foods right now, read the, read the leaflet. Erm.. put him on his side, I was like, I can't put him on his side to go to sleep cos its dangerous. Yeah, but we used to do it in my day, and I was like, that's your day, dinosaurs were around then nan.'

(Sophia, 16: IV 3)

'[Have you had contradictory advice?] Quite a bit, yeah. But then it's like, well, I've had this leaflet, OK? So, I'll go with what that says and if that doesn't work, then you know, try and talk to me and we'll try your idea. But, no, the leaflets work most of the time.'
(Sophia, 16: IV 3)

'[And why do you put him on his back?] 'Cos of all the leaflets, you know, it makes you like, put them on their back 'cos it's just less of a risk, so, it's like, yeah. [OK.] It's just easy, you know?'
(Sophia, 16: IV 3)

Sophia's relationship with her family nurse allowed her to discuss the information she was being given with leaflets as a back-up. Sophia was encouraged to ask questions when she was unsure of information,

'I think I get explained it quite a lot. 'Cos I will say well, why do I need to do that? So, then it's, you know I do feel if there wasn't a re, if it wasn't explained I wouldn't think I'd do it as much [OK.] Like, I don't think I'd listen as much. [Yeah.] I'd just think 'oh they're just saying that', or 'I can't do that much damage if I don't', you know? [And if you didn't understand it...] Erm.. I don't know, I think because I've done like, looking after my younger brothers and everything, from like babies to toddlers, I think there was quite a few things I missed, or that I didn't understand with them, so I thought, well, if I don't understand it with them, then it's easier to ask now, because I'll never understand.'
(Sophia, 16: IV 3)

Sophia had some experience of looking after her younger siblings and expressed not understanding certain things from that experience, therefore was motivated to understand the rationale for her current infant-care practices. Interestingly, she also expresses that in understanding the reason for doing something makes her more likely to do it. While Sophia's experience of receiving information supported by leaflets was positive, Evie describes a very different picture, one of being 'piled up' with leaflets – experienced as a 'tidal wave' of information.

'They've given me like, loads of leaflets, they've piled me up with loads of leaflets. But that's really about it, I mean they haven't said anything verbally, they said if I need any help, just ask. Yeah, a lot of the stuff has just been leaflets.'
(Evie, 19: IV 2)

'Like a lady did come round and must have gave me like about 30 leaflets. And I was just looking like, I don't understand what all these leaflets could say. So, but I just took 'em 'cos I didn't want to look rude. [Was that your health visitor?] Yeah. Health visitor, it was her. So, she gave me a tonne of leaflets, which I was a bit 'oh my god' like how is there that much and I think some of them were just repeating themselves. But no, I took them, 'cos I didn't want, I didn't want to look rude. So, I did take 'em off her, but I didn't read 'em. [Did she explain what the leaflets were for?] She kept going, oh, like this one's for sleep, and this one's for sleep, and this one's this, this one's that, and there is like repeats but different sort of leaflets. It made no sense.'
(Evie, 19: IV 2)

Evie's experience, although perhaps a little exaggerated, clearly illustrates her perception of being overwhelmed by what she considered duplicate and probably irrelevant information. This is an example of inefficient information transfer, although Evie did read some of the leaflets, she selected the leaflets that were relevant to her area of interest or what worried her about infant-care,

'[Have you read any of them?] I've read some, I've read a few of them, mostly ones about being ill. 'Cos, I mean like that's what I'm most worried about, 'cos I feel like, obviously I'd know if she was ill, like you know your own baby. But I'd double check, so I've read them ones, but the other ones, they're norm, they're just about sleep and stuff, like all babies are different, so like the leaflet will be a bit pointless. And she's just easy.'
'[What about safe sleep advice?] Not really, no I just sort of switch off, I don't listen at the best of times [laughs] So no, I've not looked at the sleep ones.'
(Evie, 19: IV 2)

When asked about the safe sleep leaflets, Evie had dismissed them as irrelevant, having stated several times during the interviews that she already knew what she was doing and considered herself to be a competent mother who knew what her baby needed. As no discussion ensued around the giving of these leaflets, it is easy

to understand how overwhelmed and overburdened some of the participants felt about having information ‘dumped’ on them.

‘[When you are receiving all this information how do you feel?] I’m not gonna lie, I sometimes switch off a little bit. I do, I’m not gonna lie like, when, if when they are giving me the odd leaflet fine, but like with so many, I do just switch off. ‘Cos it’s like, ‘cos she’s nearly 4 weeks old, so it’s sort of like you are starting to know what they need and what they do, so I’m lucky that I don’t really need these leaflets so I do just switch off and I act interested but then I’m sort of not even listening, I’m gone now, not listening any more [laughing].’ (Evie, 19: IV 2)

‘[Have you looked at any of the leaflets since last time?] No, not really, ‘cos they’re for a specific type of baby, and... [what sort of baby?] like all babies are different, and what will work for one won’t work of another, and like I say, I know, like she’s 4 months, and I know exactly what she needs and wants so. Yeah, no I’ve not looked at them.’ (Evie, 19: IV 3)

This style of ‘information exchange’ can also be perceived or experienced as ‘telling’, particularly for adolescents who have been recently exposed to the school environment. This may also create a ‘resistance’ to hearing important information if the perception is that they are being told what to do and may not possess the maturity to understand the relevance of the information being conveyed. This is an issue for the professional to consider, rather than the adolescent. As time passes, these young mothers are also gaining confidence in their infant-care skills, and perhaps feel they know their baby better than anyone else and do not need or value external guidance, or interference, or indeed intended helpful advice from a family member.

‘I think it’s more the fact that she’s here, like I think if they’d done it before I’d have been listening, but now she’s here I do just sort of switch off to some people, only because some people sound like they are telling you, like what the baby needs and obviously, and I’m like thanks, but I know. So, I do just switch off. It is just more the fact that she is here now, before I would have listened but now I don’t. Not that much.’ (Evie, 19: IV 2)

Although Evie suggests here, if she had had information antenatally she would have paid more attention, this is not supported by her descriptions of having received safe sleep information during her antenatal contacts. And, Sophia's quotation demonstrates that information from the midwife came too late,

'[What information have you had from your midwife?] Well, she just gave me advice on how to do the bottles and make sure they were OK, and I was like, 'I knew how to do that' don't worry'. But that's pretty much it.'

(Sophia, 16: IV 2)

The timing of information delivery is therefore important; often participants were receiving information once they had established practices such as bottle feeding and sleep practices. The information provided on that topic was then viewed as redundant and irrelevant with the risk that participants 'shut down' to hearing further information. In the absence of early professional contact, participants had either relied on their mothers or other significant relatives for early help and advice or made their own decisions on what they thought was best to do.

7.4 'Teen Attitude & Behaviour'

Some information and advice appeared to have been 'manipulated' by participants on occasion, perhaps unintentionally through lack of understanding or difficulty in remembering accurately, or intentionally, to suit their world view of a situation to support their actions. This can be observed from interview data on continuing to smoke for Sophia, and for all participants in describing their reasons for being unable to breastfeed.

Perhaps just by virtue of the participants being immersed in the developmental stage of adolescence compounded their ability to always be receptive to information and advice. Mia's tempestuous relationship with her mother was the focus of several conversations around information and advice. Mia rejected help from her mother, perhaps to make a stand in an attempt to be accepted as an adult and be taken seriously as a mother, or just to make a stand against her mother as part and parcel of adolescent behaviour:

'[Who else gives you advice?] My mum, sometimes she tells me to do this and I'm like 'mum, I know what I'm doing, just leave me alone'

(Mia, 16: IV 2)

Mia had already expressed feeling undermined by the actions of her mother which sometimes contradicted her views of infant-care, or her mother would provide infant-care without seeking permission from Mia. This was a source of frustration for Mia, and it was difficult to identify whether this may have contributed to the tense relationship between them, or whether the tension existed as part of a parent-adolescent relationship prior to the pregnancy.

Another particularly adolescent response to being given advice is that of 'I already know', and/or 'do not tell me what to do'. As in Mia's quote above, participants were keen to demonstrate that they did indeed 'know what they were doing'. Conversely, the conversations would include reference to acquiring help and advice, but this was not acknowledged explicitly, as illustrated here by Evie insisting that she was just 'checking' her knowledge,

'I do ask my mum quite a lot. Just to like double check like, I know, the thing is, I know what I'm doing, and I know what I'm talking about, but then I get worried because she's so little, so I always double check with my mum so that's why it's good to have her here, because she's literally like here or in the other room or next to me when I need help'.

(Evie, 19: IV 2)

This seems a reasonable stance for these adolescents to take. On the one hand, they are still young, and they are learning to be mothers, as any woman having a baby for the first time may experience; while on the other, they are also learning to become adults. This group of young mothers have already alluded to the increased pressure they feel to 'perform', that the expected standards of infant-care for them appear higher than for other mothers. So, it follows that they would want to demonstrate that they are ready for the role of motherhood, that they do have enough knowledge and the necessary skills to be good mothers. So, this

‘smoke and mirrors’ approach to obtaining information and making decisions about infant-care, needs to be recognised by healthcare professionals. From my conversations with the participants, those with better quality relationships with a healthcare professional did better in terms of feeling able to ‘discuss’ infant-care practices and ask questions without feeling scrutinised or judged.

7.5 ‘The Dinosaur’

When quality relationships with healthcare professionals are lacking, or when contact with professionals’ wanes, these young mothers sought other sources for advice and information or made decisions based on their own beliefs. All participants expressed the need for advice at the point when the issue arose. This ‘gap’ provides an opportunity for advice to be sought from a variety of sources, and to access information and advice that may not be in line with current recommendations. As previously stated, participants seek out a source they can trust and may accept advice from this source without question. Young mothers may also feel unable to challenge advice if they do not have a basis for or confidence in their knowledge, or if they are still living at home and advice from relatives is overbearing. Generally, participants received advice and information that was well-intentioned from relatives. During the interviews, participant’s parent/s were present intermittently, which offered insight into some of the advice they were offering. All of the advice was out of date, and frequently these parents were surprised by the current recommendations and did question the validity of some of these recommended practices, which serves to illustrate the difficulties that some young mothers may have in challenging outdated advice. Sophia’s quote, which has been used to illustrate points in several sections, encapsulates the type of outdated advice participants were receiving,

‘[What sort of advice have you had that contradicts the leaflets?] Oh, you should feed him solid foods now. No, I shouldn’t feed him solid foods right now, read the, read the leaflet. Erm.. put him on his side, I was like, I can’t put him on his side to go to sleep ‘cos its dangerous. Yeah, but we used to do it in my day, and I was like, that’s your day, dinosaurs were around then nan.’

(Sophia, 16: IV 3)

Sophia was aware that some of the information her well-meaning relatives were giving her was out of date. She had had discussions with her family nurse who had provided clear messages and leaflets to support those discussions. Sophia was also aware that her relatives were a good source of support to her, so she challenges this situation confidently, using the leaflets as a back-up so as not to alienate her primary sources of help. She also stated that she would consider their advice if the leaflets did not work. This was a very mature approach to infant-care, but Sophia was the only participant to demonstrate a definite challenge to out of date advice.

'Erm... my uncle and auntie, they're quite good, because, erm... he wouldn't, what wouldn't he do?... He wouldn't do something, and then my auntie just took over, took over and said just do this, look this works, and it was fine, so that was ok.'
(Sophia, 16: IV 2)

'[Has information from your relatives contradicted the professionals?] Quite a bit, yeah. But then it's like, well, I've had this leaflet, OK? so I'll go with what that says and if that doesn't work, then you know, try and talk to me and we'll try your idea. But, no, the leaflets work most of the time.'
(Sophia, 16: IV 3)

Related to this is the new grandparent's 'taking-over' infant-care from the young mother. This can be experienced as being 'helped' as in Sophia's case, or being 'undermined' as in Mia's case. Parents may be doing this with the best intentions to help, and their actions may be related to the complexities of the parent-teen relationship and the challenges the new grandparents are negotiating with their perception being now they have 'two' children to look after. While the young mother is struggling to be recognised as an adult and mother, the parents are struggling to recognise that their daughter is growing up and is now a mother. As discussed in the previous chapter, these relationships are complex and will continue to evolve over the coming years. The issue with new grandparents 'taking-over' care is that they are likely to do things their way and potentially perpetuate unsafe practices.

Inconsistent information from professionals can also lead young mothers to make decisions based on their own experience of being parented or rely on a trusted source, such as their mother, who may inadvertently be providing out of date and unsafe information and advice. From these data there were no particular incidences of conflicting information being given from professionals, except perhaps related to breastfeeding, however as this was not the focus, further information surrounding the breastfeeding issues was not actively explored. Anecdotally and from the literature, this is an issue and can have a bearing on information uptake.

7.6 Chapter Summary

In this chapter, a number of emergent themes have been explored in relation to *the construction of knowledge*, including participants knowledge and awareness of risk factors for SIDS, sources and reliability of information, information delivery method, medium and timing, and relevance, retention and recall of key safe sleep messages.

Participants appeared better able to understand and recall the benefits of breastfeeding and the harms of smoking, than were able to cite, and provide the rationale for safe sleep recommendations across all interviews. All participants demonstrated some knowledge and awareness of the risk factors for SIDS; however, participants were often unable to explain why they were engaging in certain infant-care practices, stating they had been ‘told’ to do it, or they ‘just knew what to do’. While ‘instruction’ usually originated from a trusted source, not understanding the rationale to support the required recommendation has implications for the ‘utility’ of that knowledge, and participants, therefore, were hampered in translating the principles of the safe sleep recommendations to other potential sleep environments outside of the cot situation. The following chapter, *fractured application*, illustrates the challenges for participants in consistently applying that knowledge during the early postnatal period.

CHAPTER 8. FINDINGS: FRACTURED APPLICATION

‘[what’s the baby sleeping on?] That right there is my pillow [laughs]. And then, that mattress is really hard [laughs]. [OK. So why is he on that pillow?] ‘Cos he won’t sleep on it otherwise ‘cos this mattress is too hard, look, feel it. It doesn’t feel like a mattress. It feels like wood. [Did it come with a mattress?] That was the mattress. It was second-hand.’ (Sophia, 16: IV 3)

8.0 Introduction

As stated in the previous chapter, one of the main objectives of this thesis was to identify young mothers’ perceptions and understanding of behaviour and infant-care practices that increase the risk of SIDS. This objective was identified to have two related components. The first being *information*; the gathering and processing of information and gaining knowledge, which was discussed in the previous chapter; and the second being the *translation or application* of that resultant knowledge into infant-care practice in general, and the infant sleep environment in particular; this second component is presented in this chapter.

The superordinate theme of *‘fractured application’* identifies that the translation of knowledge into practice can be problematic. All participants were able to identify several factors that increase the risk for SUDI and SIDS; however, they were often unable to provide a rationale to demonstrate their understanding of why these factors may increase risk or the principles involved. As the infant aged and the participant’s confidence increased in both knowing her infant and responding to their needs, advice-seeking behaviour decreased. A critical time for exposure to unsafe sleep environments occurred around the time the infant outgrew the Moses basket, which also coincided with a decrease in contact with healthcare professionals, except those receiving the Family Nurse programme. This gap in convenient access to professional support provides an opportunity for advice to be sought from an alternative source. Although sources were generally trusted and well-meaning, the provenance of the information may be questionable, perpetuating the application of outdated advice and unsafe

practice, or participants ‘worked out’ a solution themselves at the time the issue arose, adopting a solution which worked, but may not be in line with current recommendations. Even participants who continued to have contact with healthcare professionals demonstrated unsafe practice.

This chapter explores the emergent themes within the subordinate themes of *infant-care practice* and the *sleep environment* outlined in table 8.1. These themes highlight that there was some evidence of a mismatch between participants knowledge and intention, and application. This suggests that participants were either unaware, and had not received information; had fragmented recall, or were selective in its application, or they were unable to effectively connect theory to practice in different situations because a clear explanation of the relevant rationale was lacking. Consideration of the characteristics of adolescence may also be important factors in this discussion and are presented in the next section.

Table 8.1: Fractured Application – emergent themes

Emergent themes	Subordinate Themes
Convenience Fear of ‘spoiling’ the child Infant preference Mis-reading developmental stage Sleep as a goal of parenting	Infant-care
Safe sleep awareness Cot focused approach to application Move out of Moses Basket – risk stage Comfort = soft Safety – no risk assessment Preserve sleep at all cost Perception ‘sleeping baby = safe baby’	Sleep Environment

A number of emergent themes in infant-care were identified; from infant-care practice that was considered convenient for the mother, to attributing preferences of the infant in decision-making and to encouraging developmental goals such as sleeping through the night and limiting interactions with infants with the intention of preventing them from becoming ‘clingy’ or ‘spoiled’ children. Themes related to the infant sleep environment included a ‘cot-centric’ approach to the application of safe sleep recommendations, perception that a quiet and

sleeping infant is safe and not in need of checking, and that a sleeping baby should not be disturbed for any reason. As previously stated, the 'teen attitude' continues to thread through these emergent themes, and this chapter begins with a section about 'teen attitude and behaviour' to identify some of the adolescent characteristics that may have an impact on participants' ability to effectively consolidate information and translate that knowledge into practice.

8.1 'Teen Attitude & Behaviour'

The theme of 'teen attitude' from chapter six identified that participants' contextual experience of becoming mothers was occurring during the important developmental stage of adolescence and various characteristics of adolescence were observed to influence their behaviour and decision-making processes. While external perceptions can be that the process of becoming a mother accelerated participants towards adulthood, the reality for the participants was more complex. Although participants described a disconnect from their pregnancy, there were periods where they engaged with required activities such as antenatal care and wanted information in respect of their pregnancy and birth. Pregnancy was a new and individual experience for them, and their necessary engagement with services may have fostered 'adult-like' behaviour, giving the impression to professionals that participants were able to process information and make decisions in an adult way. Participants acknowledged that they needed information about their pregnancy, as what was happening to them was unfamiliar, whereas, knowledge about caring for a baby was more available to them, and probably easier to observe within their families and in day to day life, and they were, therefore, perhaps more easily able to imagine themselves practically taking care of an infant. All participants stated on several occasions that they considered infant-care to be common sense, that they had a reasonable idea of how to look after a baby, with none of the participants believing that they needed particular help or advice with this 'natural' activity and expected that they would be good mothers, able to meet the needs of their infants.

Given this starting point in attitude, it appeared that participants 'cherry picked' information as and when they considered it relevant to themselves or their

situation. And, depending on the factors identified in respect of information delivery presented in the previous chapter, this was the case. However, if one considers the characteristics of adolescence, this behaviour is entirely commensurate with this developmental stage. Key characteristics include inconsistent behaviour, variable concentration, vacillation between mature and immature decision-making processes, testing boundaries, mood swings, and challenging relationships and rejecting help and/or authority (Blakemore, 2018). While adolescent behaviours are significantly influenced by hormonal change, the imposition of pregnancy hormones and the responsibility of caring for an infant may confound further, some of these developmental tasks.

Listening to participants tell their stories revealed inconsistencies, contradiction and spontaneous or 'reactive' and unconsidered behaviour; this perhaps illustrates the struggles of adolescence and the transition to motherhood, having an awareness of what they should be doing and the reality of trying to apply this knowledge consistently in their adolescent life:

'[Have you had any alcohol or smoked since B was born?] No, I don't. I had a drink on Saturday, but I wasn't drunk, well you seen me coming in [looks to her mother for confirmation who rolled her eyes], L [partner] wasn't [sober] but that's irrelevant in this. So, I've had a drink, but I don't like alcohol, so I don't drink, it's not like I drink every day or like every week 'cos I don't like alcohol. And I don't smoke, I don't do anything.' (Evie, 19: IV 2)

Evie's protestation that she does not drink and does not like alcohol contradicts her behaviour as if by stating she does not drink or like alcohol, this cancels out the activity in some way or makes it more acceptable. Evie looks to her mother to support her claims; however, this is not provided, suggesting perhaps Evie's reality is different from what she tries to convey. She also disregards her partner's 'state', suggesting that he was significantly more under the influence of alcohol than her, but that this was irrelevant. Evie's perception is that she is wholly responsible for infant-care, even though her partner did sometimes care for the baby during the night and was present on this occasion.

In this next quotation, Evie's perception of alcohol use is that it is unsafe when caring for an infant, but she still does it and considers that she would have been fine to care for her baby, however on this occasion, conveniently, her parents were available to provide infant-care. Evie minimises her alcohol use and also the impact on her ability to provide infant-care after consuming alcohol stating, *'I said like I would have been able to [look after the baby]'*, while simultaneously acknowledging that *'once you got alcohol in your system, sometimes things can happen, and I wouldn't put myself in that position'*.

'[Have you had any alcohol or smoked since our last interview?] Oh no. D'you know, really, erm.. new year's, she was out with us, we went to a restaurant, and I had some, but I wouldn't have her to sleep, I'd wouldn't look after her in the night, like I only had 2, but I just don't think it's safe really, but my mum and dad didn't drink, so they just kept an eye on her, 'cos I said like, I would have been able to, but I just rather not, 'cos obviously, once you got alcohol in your system, sometimes things can happen, and I wouldn't put myself in that position. So, no. But no, not really much alcohol, not really a big drinker.'
(Evie, 19: IV 3)

What Evie stated and what she did, illustrates a contradiction between knowledge and application. Whether this is a particular trait of adolescence is difficult to identify within this study, the focus here being an adolescent age group and therefore comparisons with older mothers is not available. However, this polarisation of, and contradiction between statement and intention of behaviour and actual behaviour was an identifiable feature through various themes in the data for all participants and is highlighted particularly with the breastfeeding and smoking behaviours, and contradictions in the soft and loose bedding conversations for example.

8.2 Infant-care practice

All of the interviews were conducted face to face and in the participant's home. I was privileged to gain access to the room in which each infant slept at night, participants being very willing to show me the cots and other relevant equipment and sleep areas. Some of the interview narrative covered relevant points regarding my observations, however, during the interviews, participants often talked of safe sleep measures, but were in fact, 'demonstrating' unsafe practices during the interview. I was able to elicit some comment on some of these behaviours; however, there remained a 'disconnect' between participants 'stating knowledge' and 'applying it' to a variety of sleep environments. This was a finding that was unexpected and very exciting when I discovered this to be a common theme across all participants.

Participants described, or I observed, a number of infant-care practices during the interviews that appeared contradictory; participants would describe or cite safe practice, but in reality, these practices were not adhered to, in short, they were saying one thing and doing another, without seeming to notice this discrepancy. This observation was noticeable across the data, often participants were quite vocal in what they believed to be safe practice, but then did something that could be considered unsafe.

'I know they can't sleep with the bumpers in the cot, personally, this is just me, I don't like the fact that if they sleep with blankets, just in case they pull them over their face, so what I've got, I've got the sleeping bags, because I wouldn't want them to suffocate themselves' (Evie, 19: IV 1)

'I still can't use her sleeping bag 'cos she's still too small for it, so I like, have to tuck the blanket right underneath so she can't pull it over her face, and then that's it, I leave her up there [in her cot] and then she stays asleep.' (Evie, 19: IV 3)

In the same interview, in describing day time sleeps now that the infant has outgrown the Moses basket, Evie makes up a 'soft bed' on the floor using lots of pillows and blankets and places a blanket loosely over the infant, all of which contradicts safe sleep recommendations, and her own concerns regarding the use of loose blankets.

'The Moses basket is way too small for her now, and I have a travel cot but then obviously having to open it and put it down [is inconvenient], so normally I just leave her sleep on me for a little bit, she normally sleeps on me like that [demonstrates with infant], or on her play mat. When she sleeps on her play mat normally, it's all padded and comfy. [what do you put down?] Loads of blankets underneath her and then just a thin blanket over the top of her, ... so just loads underneath her, 'cos if you put her down on a flat surface she'll wake up. [OK.] She knows. But if you put her down where it's like raised and all comfy, she'll not wake up. Sometimes with her head, I might put a like a small pillow underneath it, but that's only if she's sort of in a light sleep because it's easier to put her down without her realising that my arms moved, but that's very rare.'

(Evie, 19: IV 3)

This does, however, illustrate the complexity of applying safe sleep recommendations outside of the 'cot' environment. Evie generally applies the recommendations effectively when the infant is put down to sleep in the cot, (although as the infant aged, she was less likely to tuck the blankets in). However, she was unable to transfer that knowledge to other sleep scenarios, and particularly in the latter interview, once the infant had outgrown the Moses basket. This example highlighted the use of a variety of sleep environments by participants that were used for non-night time sleep, such as make-shift 'beds' on pillows and blankets or on the sofa, in car seats, on soft bean bags and bouncy chairs for example, or falling asleep on an adult, on a sofa; none of which were safe. Participants were also likely to use these environments to leave the infant, both while awake and when sleeping in the day, to get things done. This suggests that for periods of time infants were left in these unsafe environments, unsupervised.

'Normally if she's asleep I'm normally here, if not I'm washing her bottles in the other room, 'cos obviously when she's asleep I have to take time to do things, normally it is doing things like washing bottles, like making sure her clothes are all washed and stuff like that. But then erm.. probably half the time just sit in the same room as her and chill for a little bit.' (Evie, 19: IV 3)

Evie states that probably for fifty per cent of the time the infant is alone and unsupervised in one of these unsafe situations.

8.2.1 Comfort synonymous with 'softness'

A key feature of these alternative sleep surfaces was 'softness'; and participants described 'softness' in relation to, and synonymous with, comfort. Their perception was that as the infant was more comfortable, they settled and slept better. The recommendation that infants should be placed on a 'firm' surface for all sleep seemed only to be applied to the cot, and then not all participants consistently applied it to the cot environment once the infant had outgrown the Moses basket. This 'faulty logic' was applied by Sophia to the next stage cot when having bought a second-hand cot which came without a mattress, she assumed that the wooden cot base was the mattress, and when the infant would not settle, she used a soft feather pillow as the mattress.

'[what's the baby sleeping on?] That right there is my pillow. [laughs]. And then, that mattress is really hard. [laughs] [OK. So why is he on that pillow?] 'Cos he won't sleep on it otherwise 'cos this mattress is too hard, look, feel it. It doesn't feel like a mattress. It feels like wood. [Did it come with a mattress?] That was the mattress. It was second-hand.'

(Sophia, 16: IV 3)

Sophia had thought that the wooden cot surface was too hard; however, her problem-solving skills did not extend to asking for advice, consulting with the safe sleep leaflet or reviewing the quality of the mattress that was in the Moses basket. Instead, she worked out what 'worked best' and improvised; however, she did not

consider or apply safe sleep recommendations regarding a firm, well-fitting mattress. Sophia 'figured out' what worked and had been using the pillow in place of a safe mattress since the infant was four weeks old, a period of twelve weeks, coinciding with the period of greatest risk for SIDS to occur. The pillow was ill-fitting and difficult to tuck blankets around, so Sophia left blankets loose, stating that the infant usually kicked them off. The three-sided cot she had for her infant was not attached to her bed either, as it should have been, leaving a gap that the infant's body could easily slip through, creating a strangulation risk. This sleep environment created multiple risks to the infant and raised three significant questions about 1. the safety of second-hand equipment which may be incomplete or lacking instructions, 2. what happened to the '*application*' of safe sleep recommendations? And 3. what was the role of oversight from a health professional? Sophia was being visited regularly by a healthcare professional who had not formally checked or discussed the infant sleep environment with Sophia after the initial safe sleep assessment, which was conducted shortly after birth, and when the infant was sleeping in the Moses basket. However, Sophia seemed to think that the family nurse was aware of this current cot arrangement:

'[Has your family nurse seen this?] Yeah. [And have you had any more advice about safe sleep since you came home?] No, just the leaflets.'

(Sophia, 16: IV 3)

So, although a health professional was visiting Sophia and she had stated that she found information leaflets useful, on this occasion neither prevented the construction of an unsafe sleep environment for the infant and more importantly, this situation went unchecked for a number of weeks.

8.2.2 Convenience

All participants stated their rationale for selecting some aspects of infant-care was convenience, particularly for day time infant care:

'So, yeah, she'll probably sleep down here in the day with me, so I can keep an eye on her and it's easier as if she's upstairs and starts to cry then I have to go upstairs and sort her out and put her back down and she'll probably cry when I leave'
(Evie, 19: IV 1)

[Why do you use a cot down here?] Erm... I don't, 'cos I don't have a monitor yet, like, so, I can't really, so once he's down here, I can get my stuff done like cleaning and do his washing.'
(Mia, 16: IV 2)

During the early postnatal weeks, they kept their babies close to them, stating reasons as being able to get things done and being able to attend to their needs easily. However, none of the participants had bought baby monitors and gave this as a reason that the infant was downstairs, it was also easy to bring the Moses basket downstairs with them and offered a portable sleep space during the day. Interestingly, participants also stated that the infant needed time to 'get used to being in their own room' and once this had been achieved, the next goal was putting them to sleep in their own room.

[Why would you have the baby downstairs with you?] Erm, so I can get things done [laughs]. Erm, and then when he's up in his room, so he gets used to his room, I guess he'll be taking his sleeps up there.'
(Mia, 16: IV 1)

Evie, Mia and Ruby all had a nursery prepared for their infant and were aiming for them to be sleeping in that room once they outgrew the Moses basket or once monitors were purchased. All three participants independently stated this as a goal, which identifies that this infant-care practice may be culturally quite usual and acceptable. Only Grace and Sophia did not mention this, but due to lack of space, a separate nursery was not an option for them. Similarly, for night sleep and room sharing, participants described convenience or a perception that this was 'required' but could not elaborate on reasons why this was recommended, and none of the participants mentioned room sharing explicitly as a protective factor for SIDS.

'she sleeps next to me because I wouldn't want her not to, to be honest if she was in another room I wouldn't like it, it's so much easier her sort of being next to me, and also sometimes when you leave her like, I've left her in the room like for 2 minutes on her own and she's woken up and she's noticed she doesn't like it, so she's cried a little bit, she doesn't like being on her own'
(Evie, 19: IV 2)

'[Where will your baby sleep?] With me, by the bed, but not in the bed with me. [How did you decide that?] Well, it's just easier, and babies should be next to their mum, to feed and stuff.'
(Sophia, 16: IV 1)

She's sleeping in a Moses basket in my room. [why is she in your room?] Just because, they... you're not allowed to leave them on their own anyway for six months, are you?'
(Ruby, 18: IV 2)

Another practice that was linked to convenience was the use of a pacifier, participants had bought them but were ambivalent about their use, all identified that they would only use them to stop the infant from crying, and none of the participants linked pacifiers to potential risk reduction for SIDS. Pacifier use was scant and irregular from participant reports.

8.2.3 Attributing preference to the infant

Another interesting finding was the consideration of infant preference as a component for participants with regard to some of their decision-making processes. By attributing preferences to the infant at an early stage, this was used to support aspects of decision-making around the selection of some infant-care practices, some of which were apparently to support the preferences of the mother such as the breastfeeding behaviours reported in chapter six. Similarly, with other practices, infant preference was often mentioned. It is understandable that as the mother-infant pair become familiar, then the infant's personality will emerge, however, there is evidence in the data of a mismatch between actual developmental stage and traits that were attributed to their infants by the participants.

'and I lied her down and I heard her like cry a little bit so I turned round and I left her lying sort of like slightly upright [demonstrated propping her up on pillows], see like on the pillows there, no way she could actually of fell and I turned round and her face was face planted, she was turned and I was looking at her like, I don't know how she managed to do it, because as I said she couldn't have fell, so she's already learning to turn, which is very soon.'

(Evie, 19: IV 2)

Evie was clearly describing the unsafe practice of propping the baby up on pillows; in fact, the baby was propped up on pillows on the sofa during the four-week interview. Evie protested that the baby 'should have been safe' but instead, attributed the infant with early developmental achievement, '*she must be learning to turn*', but at the same time, Evie acknowledged that this was '*very soon*'. There was a disconnect here. The infant was unable to sit at four weeks of age, nor support the weight of her head; however, Evie had assumed that by surrounding the infant with soft pillows, this would keep the infant 'safely' in an upright position; therefore, the infant must be 'doing something' to have 'got herself' into that unsafe position. Description of this event provided an interesting insight into Evie's knowledge of infant development, and her frequent assertions that she 'knew what she was doing and knew about child development'. There may well be a reasonable knowledge base, but she failed to apply her knowledge appropriately or safely in this case. Other quotations from Evie presented earlier in this section also illustrate her attributing infant preference, in support of using a 'comfy' surface and a pillow for her infant's day-time sleep, for example, and being left alone to sleep upstairs,

"cos if you put her down on a flat surface she'll wake up. [OK.] She knows. But if you put her down where it's like raised and all comfy she'll not wake up.'

(Evie, 19: IV 3)

'I've left her in the room like for 2 minutes on her own and she's woken up and she's noticed she doesn't like it, so she's cried a little bit, she doesn't like being on her own'

(Evie, 19: IV 2)

Similarly, Sophia preferred to use the bean bag to the bouncy chair, but Sophia attributed the preference to the infant, stating that *'he prefers'* the bean bag. The bean bag offered a much 'softer' looking surface, almost enveloping the infant when he was placed into the bean bag and her perception, therefore, was that he was 'comfier' and more settled in that.

'He doesn't really like it [bouncer chair] [Laughs]. So, I just leave it there and put him on the bean bag because he prefers that'. (Sophia, 16: IV 2)

This quotation from Mia indicates that the preference she attributed to the infant sometimes resulted in her engagement in potentially unsafe practice, of falling asleep with the infant in her bed.

[have you managed to keep him in the Moses basket?] Yeah, well, not really. [laughs] I put him in there. I did manage to do it for like, the first 6 weeks. And then he kinda like, noticed that I was doing it, and I kept putting him down and he kept waking up. And then sometimes, when I wake up and I'm half asleep still, sometimes I like feed him, and then I fall asleep and then he falls asleep and then I'll wake up about an hour later and I'm like 'Oh my god!'. Then I'll put him back in [the cot]. But if he's like fast asleep gone, and I put him in he won't wake up, but if he's like, if he notices, it's like 'whaaaa' and wants to be picked up again, but I don't pick him up though.'

(Mia, 16: IV 2)

8.2.4 'Spoiling' the child

All participants described the risk of 'spoiling' a child with too many cuddles, 'overhandling' or allowing the infant to fall asleep in their arms rather than their cot or having the infant around them too much. This outdated view of infant-care persists despite the theoretical basis of normal attachment behaviour (Westover, 2012). They believed that if the infant got used to being held, this was the reason babies were 'clingy', unsettled, and difficult to manage, rather than being aware that this is a normal stage of development, which influenced their infant-care practices.

'I'm not too keen on people holding him when he's sleeping [laughs] Don't make me have a spoiled baby I'll have to deal with it later [laughs]'

(Sophia, 16: IV 2)

'Like, 'cos obviously at the moment she's literally, she doesn't do anything I mean she looks at you and stuff, but she doesn't have a clue what she's looking at. I'm sat just sort of looking at her and I'm trying not to hold her too much and I don't want her to get needy, so it's a bit boring.'

(Evie, 19: IV 2)

This concern extended to others who may interact with, or care for the infant:

'Yeah, I do explain, I say I like her to be put down when she's sleepy only because if she's not put down, if she's held all day every day then it ruins like, it's not good for me, 'cos I don't hold her every day d'you know what I mean, 'cos I don't hold her every day. She's, probably for half a day she's left to her own devices, 'cos if you hold her when she's a baby, when she gets older you don't really want that.'

(Evie, 19: IV 3)

This perspective from Evie was particularly interesting as she had stated on several occasions that she knew about child development and infant-care as she had studied this at college. Participants also expressed a desire for their infant to achieve self-soothing and be able to fall asleep on their own without the 'help' of their mother's cuddles, and to 'get used' to sleeping alone.

'Erm... because like, instead of me like, holding him all day, I'm like, he'll probably get clingy to me, and I don't want him to do that. Obviously, I do, but then I don't. And erm... I just want him to get used to like, being put into there [cot], and then like, not like fully asleep, but like, going to sleep, so he falls asleep himself.'

(Mia, 16: IV 2)

These ideas about infant-care practices probably originate from the cultural norms held within families, which illustrates the difficulties of changing practice when strong opinions surround young mothers and trusted 'influencers' such as their

mothers and grandmothers, and particularly when they are living in the same household.

8.2.5 Sleeping Alone

The 'goals' of self-soothing and sleeping alone were considered the 'gold standard' and to be achieved as soon as possible. Whether this relates in part to convenience for the mother, so she can have more 'free' time, or that these are culturally 'ingrained' expectations of parenting are difficult to separate, and it is likely that there is a combination of the two here. Evie frequently described her infant as a good sleeper and was proud of the fact that she slept for long periods. This 'ability to sleep' also allowed Evie time to herself.

'she has a good sleep, 'cos she's a good sleeper. She goes bed, bath, feed then bed, she's asleep by about ten to ten and she probably wakes up about twenty past four, and now when she starts, she used to wake up about 9 in the morning, but she's pushed that down to 7 in the morning, but still that's a good sleep. So, I leave her on her own in her cot and I can have a bit of me time, 'cos it's very rare that I'm not with her, so at night I'm on my own. So, I leave her upstairs as she's such a good sleeper' (Evie, 19: IV 3)

As adolescents, the younger participants talked of the amount of time the infant 'took up' and how parenting was 'all-consuming' for them. They also talked about missing their pre-pregnant life and feeling excluded from the social connections they were establishing. While the older participants appreciated that their previous 'me' time or time spent with their partner was now significantly reduced. The perception of all participants was that a settled and sleeping baby provided them with 'free time' or 'me time'. As with the breastfeeding, there may be little tolerance for time-consuming activities, and therefore participants will try anything to get their infant to sleep and preserve sleep for as long as possible.

'Like, sometimes he just goes to sleep at about 5 or 6 [evening] without the feed and just sleep all the way through [equates to 12 or 13 hours]. Yeah. So, it's like yeah, it's pretty good.'
(Sophia, 16: IV 3)

'I leave her on her own in her cot and I can have a bit of me time, 'cos it's very rare that I'm not with her, so at night I'm on my own.'

(Evie, 19: IV 3)

Most viewed sleep as a natural occurrence and were comforted by the fact their babies slept for long periods and were quiet. Participants stated that they left their sleeping infants alone, often unchecked, sometimes for very long periods, in the belief that they were safe. None of the participants had a baby monitor but would leave their babies to sleep in other rooms, sometimes upstairs, while they went about other activities. Sophia and Evie, in particular, believed that if something were wrong, the baby would make a noise or cry and they would be alerted. The perception for all participants was that a quiet and sleeping baby was a safe baby, and not to be disturbed.

'[Do you leave him alone to sleep?] It's like, my door's wide open, 'cos as soon as I hear, like the littlest thing, I'm like something's up, I'm like no, he's just stirring [laughs]. [How often do you think you check him?] Erm.. Sometimes it's 20 minutes, sometimes it can be 45... it just depends on what I'm doing.'
(Sophia, 16: IV 2)

'I don't have one [baby monitor]. Only because, 'cos literally, obviously, the room's only just up a flight of stairs. Obviously, I always leave the door open, and that mid room is so easy to hear around the house. So, I mean you hear everything, and everyone is really quiet when she goes to bed, so I can hear everything.'

'[how often do you check her?] The longest has probably been about 5 hours, to be fair. Quite a long time, only because, like 'cos she's been doing it for so long now, I know like, touch wood, that everything's normal, if it happens every night, how it usually happens, she's normally OK. And I hear her anyway when she wakes up because, but she normally, she normally makes noises when she wakes up and normally 'cos I'm not normally there when she wakes up, she cries, she cries because she knows I'm not there.'

(Evie, 19: IV 3)

In this quotation, Evie attributed her infant with having ‘learned’ to sleep, ‘*she’s been doing it for so long now*’, and therefore believed that her infant did not require checking, she could be trusted to get on with the job of sleeping on her own. However, Evie also included the phrase ‘*touch wood*’ which was interesting, suggesting that there was an element of ‘luck’, perhaps outside of her control? However, this next quotation illustrated Evie’s beliefs about keeping infants safe,

“Cos like, I feel like bad things normally only happen if you let them happen and you’re careless. So, I would say just don’t care and don’t really worry.”
(Evie, 19: IV 3)

Evie seemed to be stating here that if you are vigilant and careful, you can keep your infant safe, while also believing it is acceptable to leave her young infant alone and unchecked while sleeping. The phrase ‘*I would say just don’t care and don’t really worry*’ may suggest that she also believes there is too much ‘instruction’ around sleeping, and if you apply common sense then there is no need to worry.

8.2.6 Sleeping is safe

Both Ruby and Evie had slightly older (aged 24 & 26) relatives who had recently had babies. Interestingly, both identified that they worried less than their older counterparts, were less likely to check their sleeping infant and were more likely to place their infant to sleep in a separate room for extended periods of lone sleeping (excluding over-night sleep). This perhaps suggests a more blasé approach to infant-care, or it may be a demonstration of increasing confidence and an ‘I know what I’m doing’ attitude or the disregard of any risk may be related to a perceived ‘invincibility’ which also may be related to adolescent attitude and behaviour.

'[is there anything that worries you?] sometimes I was going to say when she's asleep, but I don't worry when she is actually asleep. A lot of people have said to me like 'oh my god she sleeps 3 like 3 or 4 hours, don't you check her?' and I was like 'no I don't check her' and they're like 'oh, we'd worry'.

'I think, I think I'm alright, I think I know what I'm talking about, I think. No, I feel fine, I know that she's safe when she's asleep, like I know, obviously before they tell you everything, so I know from them. So, I'm fine, yeah. She's fine.'
(Evie, 19: IV 2)

Evie believed that she was following the safe sleep recommendations, even though she had 'adapted' some of them in daily use, such as not tucking in blankets. She, therefore, believed she was doing everything to keep her infant safe and believed the infant was safe when she was sleeping, and while she remained quiet. However, this following quotation represented an interesting volte-face by Evie from the antenatal interview where she stated she was a 'worrier' and considered herself to be 'too safe':

'I think I'm a bit too safe. I'd rather be too safe than not [laughs]. [Why do you say that you think you are too safe?] 'Cos I've known babies that obviously they sleep with their teddies and their sleeping blankets. I just think I'm a bit of a worrier, which is no bad thing, in fact it's quite good and knowing my luck, if I did that then something would happen, and if anything happened, I'd never forgive myself. Obviously, she'll have teddies to play with but not when she's asleep, I'd have to take it away from her, I'd just have to take it and just let her cry [laughs].'
(Evie, 19: IV 1)

Once again Evie employed 'luck' as an element involved in the safety of infant sleep; perhaps this use of language subconsciously reflected that she believed she had done everything she could to keep her infant safe, so any unfortunate event would be out of her control and not her fault.

8.2.7 Preservation of sleep

Preservation of sleep also emerged as a theme. No matter where the infant was sleeping, once they had fallen asleep, it was paramount to maintain this state. Occasionally infants were put to sleep, or left to sleep, in unsafe environments such as a car seat or pillows were used to maintain sleep, demonstrating a disregard of risk or consideration of the safety of the sleep environment. Participants focus at this point was to maintain sleep at any cost.

'If he falls asleep in the car in it [car seat], and if he's still asleep when I bring him in, then I'll just leave him there. When he wakes up, I take him out. [And is he in his outdoor clothes until then?] Yeah.'
(Mia, 16: IV 2)

'Cos if you put her down on a flat surface she'll wake up. [OK.] She knows. But if you put her down where it's like raised and all comfy, she'll not wake up. Sometimes with her head, I might put a like a small pillow underneath it, but that's only if she's sort of in a light sleep because it's easier to put her down without her realising that my arms moved, but that's very rare.'
(Evie, 19: IV 3)

8.3 Application inconsistency

As illustrated in the previous chapter, all participants were aware of some of the main safe sleep recommendations, putting the baby on their back to sleep, feet to the foot of the cot, not too many blankets to prevent over-heating, not too many toys in the cot and the dangers of co-sleeping:

'making sure that the blankets aren't over their face.... [thinks] erm... and they are not overheating'
(Grace, 17: IV 1)

'Erm.... Temperature has to be right, sleep them on the back... Get a thermometer, get one that you can put on the wall or something, so that'll tell you what the temperature is... erm... not too many [blankets] wrapped around [laughs]'
(Mia, 16: IV 1)

'Like, putting her at the end of the cot and stuff like that, that's and obviously not sleeping in my bed with her.... . And obviously not too much in the bed with where she's sleeping.'
(Ruby, 18: IV 2)

'[How do you put him down?] Back. [Do you always do that?] Yeah. Because he has to be on his back with his feet touching the end of the crib.'
(Sophia, 16: IV 2)

'Feet at the end of the cot, take all of her toys out, tuck the blanket right underneath so she can't pull it over her face.'
(Evie, 19: IV 3)

Infant sleep position was consistent, even when placed on unsuitable surfaces with loose bedding, the position was always reported as supine, except for Evie, who reported placing her infant prone, on her chest while she was sitting on the sofa.

'[What position do you put her down in?] on her back [did the midwives tell you that?] I just done that anyway, no one ever told me but, I'd just naturally do it.'
(Ruby, 18: IV 2)

'[what position do you put him down in?] Back. [Do you always do that?] Yeah. Because he has to be on his back with his feet touching the end of the crib. [Have you been tempted to do anything else if he's not settling?] No.'
(Sophia, 16: IV 2)

The fact that all of these infants were put to sleep on their back and at the foot of the cot (whichever cot they were using), suggests that the strength of the 'back to sleep' and 'feet to foot' messages from the nineties is an enduring one. These simple, concise messages were launched as part of national media campaigns, and their persistent usage seems to have permeated infant-care culture. However, while this is a positive milestone to have reached if mothers are unaware of the rationale which underpins these recommendations, there is a risk that they will begin to depart from these practices with the changing needs of their infant, or perceived infant preference. Other messages, as they have been included into the

recommendations are perhaps less clear, and as a result, seem to have had varying degrees of success in being recalled accurately and/or taken up and applied; particularly the loose bedding messages seemed to cause some confusion for all of the participants. Participants more often related blanket use to overheating while only Evie stated the risk of suffocation if blankets were pulled over the infant's face, however even Evie more frequently mentioned blankets in relation to overheating rather than the risk posed to the infant by them being loose.

'I don't like the fact that if they sleep with blankets, just in case they pull them over their face, so what I've got, I've got the sleeping bags, because I wouldn't want them to suffocate themselves.' (Evie, 19: IV 1)

'[What position do you put him down in?] Just on his back with just his blanket and... it's just over the top of him.' (Mia, 16: IV 2)

'He sleeps in a vest and a sheet. I just kind of lie him down and put the blanket on his tummy 'cos then he can kick it off.' (Sophia, 16: IV 3)

This may explain why participants did not always tuck blankets in, with their perception being to enable the infant to kick the blankets off if they were too hot, this activity, therefore, appeared logical to the participants to reduce risk. Even Evie stopped tucking blankets in despite sharing her concerns about the risk of suffocation in her first interview.

'Where I did used to be so scared of her pulling the blankets over her head, but she's been sleeping in her blankets since she was first born, and she's never done it. Touch wood. And I think maybe, when she's older, probably she'll sleep in a sleeping bag, but at the moment she kicks the blankets off, she never wakes up with 'em on her, she hates them being on her. [And where are the blankets?] Right at the bottom of the cot, she kicks them down, so she can never reach it again'. (Evie, 19: IV 3)

Similarly, the section above relating softness as being synonymous with comfort, 'soft surface' was linked to encouraging or maintaining sleep. The focus was on infant sleep rather than safety and consideration of the recommendations. However, the ability to consider risk and employ preventative strategies was identified for reducing the risk of bed sharing by Evie and Sophia.

'[Are there any times when you just have him in bed for a cuddle?] Yeah, I have to switch my lights on, like bright, 'cos I have a dimmer light, so it's on the brightest setting, 'cos I don't want to fall asleep [laughs]. And then I walk around a little bit, like yeah, that's fine, I'm awake [laughs].'

(Sophia, 16: IV 2)

Sophia had unintentionally fallen asleep with her infant previously and 'scared herself', so took steps to prevent this happening, whereas Mia did not consider any preventative strategy, even though she had fallen asleep with her infant in bed with her on several occasions.

'Yeah. My mum, sometimes like in the morning, if I've done it, she comes in, and she'll take him off me and puts him in [the cot]. 'Cos she always tells me don't do it, don't do it. [Yeah. It can be hard though]. Yeah, 'cos he's warm and you're warm and you are keeping each other warm. [Have you thought about things you can do to stop that happening?] No, not really.'

(Mia, 16: IV 2)

8.4 Chapter Summary

This chapter has considered the *translation* or *application* of participants knowledge about safe sleep and SIDS risk reduction messages into infant-care practice in general, and the infant sleep environment in particular. The chapter's title, '*fractured application*' identifies that translation of knowledge into practice can be problematic. Participants were able to cite some of the safe sleep recommendations and did apply some of them, generally when the infant was very young. All participants received some information about safe sleep recommendations, either during the late antenatal or early postnatal period;

some were able to recall the information, others not so easily. There was evidence of incomplete knowledge and some confusion about particular safe sleep recommendations. Following the initial presentation of information, whether verbally or in leaflet form, participants did not mention any subsequent discussion or assessment of the infant sleep environment, by a healthcare professional. As the infants outgrew the Moses basket, and participants' confidence in their parenting skills increased, information seeking behaviour decreased, and there was evidence of a departure from consistently applying some of the safe sleep recommendations, particularly for day-time sleep and as the infant aged. This period coincided with a decrease in, or withdrawal of health professional contact, creating a hiatus which was ameliorated by participants seeking advice from alternative sources, which may have inadvertently provided outdated and unsafe advice; or by working it out for themselves with a 'best fit' solution. All participants adopted unsafe infant-care practices of some sort in a variety of situations, most likely unintentionally, and while trying to do the best for their infants, and simultaneously negotiating their own new and unfamiliar role as a mother.

[thinking back to your safe sleep information, how much do you think you are actually doing?] Quite a lot, apart from probably, 'cos I know safe sleeping, some people are totally against blankets, so apart from that, I know no toys around the cot, feet to the end of the cot, nothing that she can grab, so yeah, I think, I think most of it. 'Cos, I think that is the most important thing to be fair, how they sleep, obviously when you're asleep you can't know what they are doing. So, I think that's the most important thing, so, I think I have taken quite a lot on board.'

(Evie, 19: IV 3)

During the writing up of these three findings chapters (six to eight), I have continually gone back and forth between the emergent themes flip charts, the participant concept and quote sheets, and the transcripts, in order to ensure the focus of writing had foundations in the participants' original narrative.

This chapter has been the most challenging to write, as I realise, I am having to work much harder to 'interpret the meaning' for participants in this section. While this subject was easy to identify as a theme and follows logically from the previous theme of 'information', there were less explicit or descriptive quotes to draw upon from the narratives and a realisation that the basis for this chapter rests in a combination of narrative and my observations. This in itself is a revelation; if I am struggling to interpret why participants do not apply safe sleep recommendations consistently, this is because my interpretations are a reflection of how participants are trying to make sense of their own behaviour, which is inconsistent. Participants appear to be able to 'consciously' apply safe sleep recommendations some of the time, and particularly when the infants were in the Moses basket, but this application is inconsistent once the infant outgrows the Moses basket. My observations support that these mothers 'subconsciously' do what comes naturally to them, they resolve issues that arise but apparently without consciously thinking them through, this is reactive not planned, they do whatever works, or they accept advice without question or challenge. These elements combined with an adolescent attitude seem to suggest that this inconsistency is part and parcel of adolescence and as such, is the foundation of their parenting behaviour. But also, that some of the safe sleep recommendations in themselves are not always practical to follow in every situation or clearly communicated, for day-time sleeps for example.

CHAPTER 9. DISCUSSION & REFLECTION ON THE RESEARCH PROCESS

9.0 Introduction

The discussion has been divided over two chapters to present a critical review of both the research process and the findings separately. This chapter will critically draw together the background and justification for this research; revisit the aims and objectives of the research, and how these have been met through the selection of IPA as an appropriate methodology. The methodology is critically appraised, examining aspects that presented some challenge to me as a novice researcher, for example, issues related to the ambiguity of interpretation and meaning attribution, and the distillation of meaning from exclusively within the participant narrative are discussed. Aspects of quality and validity are addressed, and my positionality as a 'practitioner researcher', the challenges and benefits, and the impact that this dual role has had on the research process are also critically evaluated. Each of these aspects of the research process is examined in relation to the current literature and contribute to the foundation of the technical account, providing context for the discussion of the key findings in chapter ten. The chapter concludes by identifying the strengths and limitations of this research.

9.1 Research background

Chapter one identified that, in spite of widespread awareness of the risk factors for SUDI, and health professionals delivering infant safe sleep and risk reduction education to parents since the early 1990s, many infants continue to be exposed to a range of risks, and most deaths now occur in situations where risk reduction measures have not been followed (Blair et al., 2009; Coventry, Solihull and Warwickshire SCB, 2014; DfE, 2014; Garstang et al., 2016). SUDI is also more likely to occur in families with identified vulnerabilities such as young maternal age, low educational achievement, smoking, alcohol and substance use (Blair et al., 2009). As a practitioner working in the child death investigation team, I was often confronted with young mothers who expressed being unaware of some of the risks they exposed their infant to, and more often than not, significant and

multiple risk factors were identified within the home or sleep environment. Importantly, some of these parents were also noted to have had safe sleep and risk reduction information from health professionals. However, recent research reports that mothers identified at increased risk of experiencing SIDS have less knowledge of risk reduction strategies than mothers considered to be low-risk (Pease et al., 2014, 2015 & 2017a) and, in Caraballo's study (2016), young mothers were aware of the recommendations, but belief in 'maternal instinct' and that sleeping with their infant was protective, were prioritised over the recommendations. Therefore, the current educational strategies are not working, or are not perceived as relevant by high-risk mothers.

9.2 Research justification

While working with parents who had experienced the sudden death of their infant, the more important it became to understand *why* these parents appeared to be unaware of some of the important risk factors, and *why* they continued to engage in behaviour that increased the risk to their infant, despite receiving safe sleep information from health professionals. In order to further reduce SIDS rates, educational approaches need to be modified, which, in turn, means that a deeper understanding of what motivates and supports behaviour change in this vulnerable and high-risk group of parents is required.

The literature review revealed that two qualitative research studies investigating knowledge of safe sleep recommendations and factors that influenced infant-care practices focused on the adolescent age group. In Colorado, USA, Caraballo et al. (2016) used focus groups with high school mothers, while in Bristol, in the UK, Pease (2016) used a mixed-methods approach with vulnerable mothers, which included some adolescents; however, the idiographic, in-depth perspective of the adolescent mother was absent. I have followed Pease's work with interest, and some of her findings have informed this research; Pease concluded that further in-depth, qualitative research was required with this vulnerable group of parents to identify the motivation for their behaviour. My research aimed to provide this in-depth perspective: to reveal what life is like for vulnerable young mothers, what is important to them in terms of their understanding of, and the relevance and

utility of risk reduction information, and how they arrive at decisions around infant-care practice. Then, through a technical account, share this insight to facilitate understanding of the life-world of the young mothers in this study, which offers a unique contribution to the evidence-base for professionals, policy makers and researchers to draw upon.

The research questions were therefore designed to elicit rich data from the perspective of the young mother, to expose the complex interaction between knowledge of risk factors and application of this knowledge to the infant sleep environment, and to identify the factors influencing this interaction.

9.2.1 Research Questions

While refining the research approach, the initial research questions were transposed to secondary questions, as it became apparent that the 'context' was important to describe first and could offer a lens through which to consider the secondary questions. IPA was selected as likely to deliver the most relevant data to understand the context from an idiographic and in-depth perspective (the lived experience) as described in chapter three and to answer the secondary research questions. IPA research questions are intended to explore the 'lived experience' of individuals in 'particular circumstances' and are therefore initially quite broad, ***'what is the lived experience of young first-time mothers with an infant up to the age of six months?'***. Then the secondary questions can be theory-driven in order to answer a research dilemma (Smith, Flowers & Larkin, 2009); therefore, ***'what do mothers understand about what constitutes safe sleep for their infant'*** and, ***'what influences their decision-making around infant-care practices related to the sleep environment?'*** have their foundation in the literature and prior research. The findings from this research can then be interpreted to identify the *'why'*, using theoretical frameworks such as developmental models (Erikson, 1959; Piaget and Inhelder, 1969; Vygotsky, 1978), ecological (Bronfenbrenner, 1979) and transactional models (Sameroff, 2009), social cognitive theory (Bandura, 1977), the theory of planned behaviour (Fishbein and Ajzan, 2012), and the triple-risk model (Filiano & Kinney, 1994).

While IPA was the most appropriate methodology to provide a richness and depth of idiographic data to answer the research questions, some limitations were experienced during the research process, such as recruitment issues, and in applying IPA as a novice researcher. Issues specifically related to the data collection and analysis phases were identified and are discussed in the next section.

9.3 Evaluation of study methods

9.3.1 Recruitment and retention

Some recruitment issues have been discussed in chapter four (4.1.3); however, the challenge of adopting a longitudinal approach with any group of participants has been identified as difficult (Gilliss et al., 2001; Yancey, Ortega and Kumanyika, 2006). While there were challenges with recruitment and retention across the three time points, the resultant depth and quality of data generated, and the novel findings revealed, offset these challenges. Reflection on the recruitment process highlighted that as recruitment progressed, it gathered momentum, but this took time to establish and was likely due to the time it took to develop relationships with professionals with access to the target population (Ewing et al., 2004; Ward et al., 2009). I have learned a great deal about the recruitment process and the necessary groundwork that is required before commencing any interviews. In future, I would aim to develop relationships with key stakeholders, involving them at the planning stages of the research to facilitate early access to the participant group and support early recruitment and retention. I also considered whether conducting interviews at only the two postnatal time points would have been more pragmatic, given the comparative findings that these time points revealed; however, on reflection, analysis of the antenatal time point revealed interesting data on the perspective and experiences of these young women as adolescents, and as such contributed to the context of their experience. Therefore, the three time points each contributed valuable and enlightening data to the overall project, and to answer the research questions.

9.3.2 Data collection

One of the challenges of IPA, perhaps specifically as a novice researcher, was in achieving a balance between not wanting to 'steer' the interview – staying with the participant agenda but needing to achieve data to answer the research questions. Consideration of this issue represented numerous entries in my reflective diary, and it took considerable effort to 'step back' from probing topics that I was interested in, considered important or felt were necessary to answer the research questions, to allow the participant voice to be revealed:

It is difficult to reconcile what I want to know and what participants are telling me/ their agenda – what is important and relevant to them – even though a bit off topic. This direction also influenced my 'probing', sometimes I wanted more information on a topic, but this was 'cast aside'. What 'I think' is important, is apparently less important to the participant. I need to be confident that the interviews ARE actually revealing important things from the participant perspective – these ARE authentic data! They are THEIR data!

Having the confidence to remain with the participant agenda revealed interesting themes that I was unaware of at the time of the interviews, and once participants had had their babies, they readily shared the experience of their reality, revealing a depth and richness of data. Also, as I became more relaxed and familiar with the interviewing process and the rapport between myself and the participants developed, data collection was more relaxed, and I spoke much less, demonstrating that the interview process was perhaps more comfortable for both parties. I did attempt to use Skype and telephone interviews when access to participants was difficult, however, the observational aspect afforded by the face to face interview situation revealed novel and significant findings that would not have otherwise been captured, such as seeing what participants were doing while they were describing doing something different.

Issues of quality and validity assessment have been explored in depth in chapter five. The quality assessment framework offered by Yardley (2000) is considered particularly useful for IPA (Smith, Flowers and Larkin, 2009:180-183) and is based on four principles of sensitivity to context, commitment to rigour, transparency and coherence, and impact and importance. Throughout the research process, I have kept this framework both visible and in mind and have regularly reflected on the research process applying these four principles. I found the use of this framework particularly reassuring when moving from my interpretation of the data to writing the technical account, continually checking the quality of the work against this framework.

9.3.3 IPA – an appropriate methodology

Reflecting back on my experience of using IPA, revealed that it was both enjoyable and challenging; from my early anxieties around understanding and applying the methodology as a novice researcher, feeling overwhelmed by the data, and the added complexity of the longitudinal approach; to the responsibility of interpreting and representing the participant voice in a meaningful and useful technical account. What I found most exciting, was that some of the data surprised me; as a practitioner working in this field for many years, this was unexpected. On reflection, this was due to engaging with IPA and understanding its application; of putting aside my usual pragmatic and solution-focused approach and instead, allowing the participants to relate their story, in their way. This revealed information that I would likely have missed had I selected a more structured method and proceeded with my agenda about what I thought was important to find out. As a consequence, and although I had some anxieties about drifting ‘off topic’, I have gathered meaningful and enlightening data, and have learned about things that I had never really considered before, such as what happened when infants outgrew their Moses basket, which increased the use of unsafe and ‘adapted’ sleep environments for their infants.

There were some aspects of IPA which I found challenging, which were revealed as the research process unfolded. Issues such as the recommendation to conduct data collection before scrutinising the subject literature to avoid superimposing a

theoretical framework and thereby influencing data collection. My interest in the topic and my research questions are grounded in professional experience, prior research and an understanding of the 'literature gap'. While I acknowledge the principles of approaching the interviews without pre-conceived ideas and presumptions, I would suggest that avoiding engagement with the literature during the preparatory stages of a research project is challenging, and to try to 'block out' such information may be unrealistic for most researchers, and particularly for research projects with limited resources. Also, research questions are surely borne out of some knowledge of prior research and an appreciation of the knowledge 'gap' to be filled; and researchers are likely to have developed theoretical perspectives in relation to their topic of interest (Paley, 2017). Although I am critically reflecting on this issue as a novice researcher, and perhaps more in need of a foundation to work from, I would argue that the more experienced the researcher, the greater the likelihood that they will be operating from a strong theoretical perspective, and with a good knowledge of the extant literature in their field of interest. While understanding my particular knowledge base and theoretical perspective and declaring it from the outset; I think it is naive to suggest that I was able to 'suspend' my theoretical perspective in the research process. I was certainly more aware of my perspective, and conscious of the impact this may have had on the research process through maintaining a reflective diary, but I do not believe that in stating my perspective it 'removed' that influence.

The second, and most challenging issue that became apparent during the analysis phase related to 'interpretation'. The premise of IPA seeks to find meaning from *within* the participant narrative, with the expectation that the researcher applies the double hermeneutic to the participant narrative to make sense of (interpret) the participant making sense of the phenomenon (Smith, Jarman and Osborne, 1999). While I followed the Smith, Flowers and Larkin (2009) process closely, no particular guidance was provided regarding how to 'interpret' and at what stage this should occur. The nearest 'explanation' of what interpretation in IPA was or how to achieve it, came from this quotation, "... do I have a sense of something going on here that maybe the participants themselves are unaware of?" (Smith

and Osbourne, 2014:53). This small nugget became the basis for my interpretation. This way of thinking about interpretation facilitated my understanding of how to bring together, in the technical account, what was explicitly important for participants (idiographic narrative) dovetailed with my interpretations of what appeared to reveal itself via the application of the hermeneutic cycle. I believe this lack of explicit 'interpretive process' to be a limitation of the methodology and would have found information on this element of analysis helpful.

I experienced a similar 'struggle' with 'meaning attribution'. Meaning attribution is the *meaning* the participant brings to the telling of her story; the role of the researcher is to *interpret* and to *try to understand* that attributed meaning. However, my interpretation is based on my fore-structure which is different from that of the participant. Therefore, I would argue that both the participant and the researcher are applying external theories and learning (what things mean to them, individually constructed from their experience of their lifeworld = imported theories) in the co-construction of the data and the technical account, rather than distilling meaning from exclusively within the narrative itself (Brocki and Wearden, 2014; Smith, Jarman and Osbourne, 1999).

I have imported external theories and research during the design and execution of this project. Although I have maintained a reflective diary and tried to think critically about my 'fore-structures' and how these might influence the research process, I think it is challenging to achieve and represent this in the technical account; and to demonstrate to the reader how meaning was distilled from the text in isolation of external theories and research. 'Meaning attribution', therefore has to be what the analyst brings to the data, and that includes importing pre-existing theories and learning (Paley, 2017:146).

My reflections on the analysis phase, and the interpretative process in particular, reveal that although I have tried to distil the themes from the data, without a specific 'interpretive' criterion, my belief is that it is likely that I have influenced the themes generated due to my theoretical perspective and the desire to answer the research questions. However, Brocki and Wearden (2014:12) point out that if the resultant identified themes are similar to those on the topic guide, this is

suggestive of findings based on pre-conceived themes, 'during interview interpretation', or points to a lack of proper data analysis. As my themes are not directly related to my topic guide questions, and I consciously tried to avoid early interpretation during the transcribing and initial noting phases of analysis, this offers some assurance that I have focused on the participant narrative that captures their experience, and that the themes have their origin from within the narrative. I have also been able to present the themes supported by participant narrative that 'stood out' from the transcripts, and by working through the data analysis process thoroughly, I believe that I have captured what was important for the participants as well as highlighting interesting and novel findings that perhaps the participants were unaware of (Smith and Osbourne, 2014:53).

At this point, I can only be transparent about my thoughts on theme generation. However, during this process, I have been able to reconcile my reservations regarding 'interpretation' and the possible importation of external theories, with identifying themes that were evident within the participant narrative, and by using direct quotations from the participant narrative to illustrate the content within each of the three superordinate theme chapters.

9.3.4 Hermeneutics: interpretation

The idealist constructivist position acknowledges that people share their world with others, therefore live in a world of shared interpretations; all understanding is interpretation (Heidegger, MacQuarrie and Robinson, 1962; Smith, Flowers and Larkin, 2009:17), and how individuals interpret and construct meaning creates and maintains their social reality (Gergen, 2007). As a nurse, my basis for interpretation is my life experience and understanding; this is my socially-constructed world view and must be acknowledged in the research process (Berger and Luckmann, 2011). Gardner (1996) and Sandelowski (1994) argue that nurses routinely operate in the interpretive paradigm, where patients are viewed as experts of their own experiences and nurses work through interpretation of their narrative as the basis of assessment and therapeutic intervention. Interpretative methods also acknowledge that as a researcher, I can both influence and be influenced by the research process; the philosophy of

hermeneutics is interpretation, and it is by recognising these influences on interpretation, that a deeper level of understanding of the phenomenon can be reached (Hand, 2003; Schmidt, 2014). However, when the participant is struggling to make sense of their own experience, or their narrative and actions are in conflict, the researcher is also likely to struggle to interpret and make sense of the situation. While working towards the '*fractured application*' theme, I encountered difficulty in interpreting meaning from this group of emergent themes which, on reflection, related to participants struggling with an inconsistent application of safe sleep recommendations.

In summary, IPA was an appropriate methodology that delivered rich, idiographic data about the lived experience of the young mother; and through the narrative of the participants, I have been able to answer the research questions authentically, and from the unique perspective of the young mother. I feel I have learned to apply IPA competently, while critically appraising certain aspects of the methodology. Few longitudinal IPA studies have been published, and of those published, little reference is made to the data analysis process. The process that I developed, and made explicit in chapter five, to facilitate analysis of my longitudinal data, could be incorporated into the methodology guidance to support novice researchers to apply IPA in future longitudinal studies. I have shared some of my experiences in conducting analysis with longitudinal data with colleagues on the IPA forum, as this is a point of debate, illustrating the lack of clarity around this issue. While one of the strengths of IPA is reported to be its flexibility in application, as a novice researcher, it would have been useful to have clarification on aspects such as longitudinal data analysis, interpretation and meaning-making. The knowledge, skills and clinical experience that I brought to the process both supported and challenged my role as a researcher, and I have reflected upon these issues in the next section.

9.4 Practitioner as the researcher: positionality and reflection

Qualitative approaches acknowledge that the researcher inhabits the 'lifeworld' and is, therefore 'situated in' the research relationship, bringing with them pre-existing knowledge, values and beliefs which are likely to impact on the research

process. As a health professional working within the subject field, there are additional risks and benefits with this position which must be made explicit to facilitate transparency in the research process. From the outset, my professional background and interest in the topic were declared (Leslie & McAllister, 2002) and I have maintained a reflective diary throughout the research process, excerpts of which have been included throughout this thesis to illustrate relevant personal reflections and dilemmas, and demonstrate how solutions were identified (Clarke, 2009).

My professional expertise, involvement with the subject, experience of working with the participant parent population and the existence of my professional networks, creates my specific perspective. It is from this perspective that the research questions were generated, and one which impacted on the research process, from identification and recruitment of participants to collection and interpretation of the data, and presentation of the findings. Gardner (1996), and Leslie and McAllister (2002) suggest that being a nurse and a researcher has benefits which positively impact on the research process. In declaring one's background to the participant, there is then a co-construction of data based on the shared understanding of the 'cultural construction' of the nurse; which can be reassuring to the participant. Other benefits include access to hard to reach groups, encouragement of participant disclosure, and depending on the nature of the research, a shared understanding of participant circumstances. While I was able to use my professional networks to engage professionals to identify prospective participants from this traditionally hard to reach group, and there was a shared understanding of the importance of the research topic, there were challenges to declaring my background. My experience of declaring my professional background at the beginning of the pilot interview was contrary to Gardner's position; the relationship established was that of health visitor-client, rather than researcher-participant. I was the outsider/ professional with knowledge, which impacted on the power dynamic and subsequent sharing of data. Having reflected on this at length, the young age of the participant may have contributed to this dynamic or, given that Grace had not engaged in much antenatal care, she was perhaps seeking information triggered by the questions I

asked. Either way, for all subsequent interviews, I decided to introduce myself as a health researcher and did not elaborate further on my professional background. This allowed the participant to view me as a researcher and allowed me to be the researcher. If participants had enquired further, I would have shared my background with them, but I did not want to risk this aspect influencing the research process. As to whether or not declaring my position for subsequent interviews may have had the same impact, I am unable to comment. However, I believe that by not knowing that I was a health visitor and midwife, participants were enabled to speak more freely and perhaps did not feel that I was judging their parenting philosophy from a professional perspective.

Although I began the research journey as a novice researcher, I had considerable professional knowledge and experience, but also likely imported pre-conceived ideas and assumptions about the population of interest and their behaviour and decision-making. However, I was an 'outsider researcher' (Burns et al., 2012; Unluer, 2012). Having reflected on my 'position' during the research process, I have identified that it was not static; different 'positions' emerged as I became more familiar and comfortable with the researcher role and relationships with participants developed (Milligan, 2014). Due to the use of serial interviews, this facilitated a shift in my position, as I was accepted more readily by participants as someone to talk to by the second and third interviews. Small changes in my position were identified as participants perhaps began to feel that I was interested in what they had to say without making comment or judgement or trying to 'correct' them. Due to this relationship development, perhaps I was accepted as more of an 'insider', which then contributed to the co-construction of data which revealed the 'hidden'. I believe more 'authentic data' was gained on the participants' views and actions which revealed novel findings, as participants were enabled to share what they thought and what they did, and hopefully not what they thought I wanted to hear. As knowledge and understanding increased between myself and the participant, there is a case to suggest that as a researcher I moved along the continuum, from 'outsider' towards the 'insider' position. I will never be 'an insider'; however, I now have an increasing appreciation of what life is like for a sample of this population, and as such I might arrive at a point of being

‘an inbetweener’, with privileged access or acceptance (Milligan, 2014). Understanding positionality within the research process and being conscious of this and how it develops attributes agency and acknowledges potential influences on the interpretation of the data as the researcher perspective changes.

Possibly the most significant challenge experienced as a practitioner-researcher was the identification of unsafe practice. This was considered in depth during the ethics application process and is detailed in chapter four; however, an issue of concern was identified at a third interview. I reflected on this event and how I would have managed this had it presented at a second interview. Ethically, I could not have left the participant continuing to engage in unsafe practice, but as the aim of the research was to explore why mothers made the decisions they did, it was hoped that by asking further questions about the situation of concern, that the participant would be able to come to a point of resolution herself. This is an example of co-construction of knowledge within the interview process, and one which is intended to empower the participant reminiscent of a feminist approach (Yoder and Khan, 1992). If the issue had remained a concern, I would have contacted the relevant healthcare professional on leaving the participant, to encourage follow-up with their client, but understanding that this would potentially impact on the future data. On reflection, even with professional intervention following an interview, there would still be value in continuing to a third interview, as the event with this participant demonstrated that she was ‘*stating*’ knowledge of safe sleep practice, while ‘*demonstrating*’ unsafe practice, revealing a disconnect, a ***fractured application***, which is discussed in chapter ten. In summary, I feel that as a practitioner-researcher there were challenges to negotiate as I learned to become a researcher and take a different perspective to allow participants to reveal their story without ‘me interfering with my professional agenda’. This was a unique experience in itself and remaining conscious of my positionality and constantly reflecting on it, allowed the participant to share their experience. Although I have interpreted their experiences in light of my fore-structure, I believe that I was very open-minded to what was being revealed and have tried to approach the interpretation in a similar vein. The findings presented in chapters six to eight of this thesis are supported by

direct participant narrative to facilitate understanding of the lived experience of young mothers, and how they receive and process information that has an impact on their decision-making and resultant infant-care practice.

9.5 Strengths & limitations of this Research

A number of strengths and limitations of this small exploratory study have been identified. This research project was carried out by one researcher, which could be considered both a strength and a limitation. The strength of this position supports consistency in data collection, analysis and interpretation, but in itself may be considered a limitation. To mitigate the limitation and criticism of single researcher bias, external checking and verification/audit processes were included at various time points and have been made explicit in chapter five.

9.5.1 Strengths of this Research

There are three key strengths to this research; the methodology, the longitudinal aspect and revealing the young mother's voice. IPA offered the opportunity to add 'depth' to previously published findings that have identified that vulnerable parents continue to adopt infant-care practices that increase the risk for their infants in the sleep environment; this research aimed to find out why. With a focus on a small homogeneous sample group, achieving a richness and depth of data was the objective. As such, this thesis adds a new knowledge to previous researchers' work identified in chapter one: the unique perspective of the young mother.

- The longitudinal aspect of this study adds particular information around decision-making and behaviour change that occurred over time. Although other studies have gathered longitudinal data, this is the first study, to the author's knowledge, that has aimed to gather rich idiographic data, with a specific interest in the infant sleep environment and young mothers decision-making, over a six-month period.
- The second advantage of the longitudinal aspect was that the study period included all seasons which may have identified differences in infant care practices, particularly with the use of blankets, hats and the potential for over-

wrapping, and potentially an increased rate of bed sharing during the winter months.

- And finally, but most importantly, the voice of the young mother was represented in this thesis. By recognising and putting aside professional assumptions and allowing the participant narrative to convey the experiences of participants, it is hoped that readers of this thesis will gain some understanding into the world of the young mother and what life is like for them. Although not generalisable, this work could be transferable, as it represents a unique contribution and the perspectives revealed here could inform future practice, policy and research considerations.

9.5.2 Limitations of this Research

The limitations are the small homogeneous sample, incomplete cases and of potentially missing opportunities to explore key issues further.

- The methodological requirements of IPA, for a small homogeneous sample group, have been presented in chapters four and five. While this can be considered a limitation, the richness and depth of data generated has provided detailed insight and novel findings not previously identified in the literature. While these findings cannot be generalised to the general population of young mothers per se, significant similarities were shared between these participants, providing an insight into the lived experience of young mothers not previously described in the literature.
- A smaller sample than desired was achieved, and not all participants completed all interviews. However, all intended interview time points were captured; and all data gathered was included in the analysis and novel findings have been reported.
- In order to remain faithful to the IPA philosophy of idiographic focus, the researcher endeavoured to refrain from directing the interviews and asking too many questions. On reflection, there were some missed opportunities to gather further information on some topics of interest. This could be viewed as a limitation; however, in the spirit of IPA, the participant agenda was respected, issues that were perceived as important or interesting to the

researcher were not necessarily important or relevant to the participant. Adhering to these principles has given rise to novel findings that may otherwise not have emerged if a more structured interview approach had been pursued.

9.6 Chapter Summary

This chapter has revisited the justification for this research, and critically examined IPA as an appropriate methodology to achieve the research aims and objectives. My positionality as a 'practitioner researcher' and the implications of this dual role have also been critically evaluated. The chapter concluded by identifying the strengths and limitations of this research. Each of these aspects of the research process contributes to the context for the discussion of the key findings. The key themes identified and presented in the findings chapters are critically discussed in relation to the research questions in chapter ten.

CHAPTER 10. DISCUSSION OF FINDINGS

10.0 Introduction

In this second discussion chapter, the emergent and subordinate themes encompassed within the superordinate themes of *transition*, *the construction of knowledge* and *fractured application*, are critically discussed in relation to the research questions, and within the context of the extant literature and current health service provision. The first research question revealed that the context of the lived experience of the young women in this study was adolescence and is presented in the superordinate theme of *transition* in chapter six. Two specific areas within this context emerged as influential in their decision-making activities and infant-care practices: identity and relationships, and adolescent brain development. The secondary questions revealed that participants' knowledge of risk factors and safe sleep recommendations, although not extensive, occasionally appeared accurate but on further probing was incomplete and lacked rationale. The superordinate theme of *the construction of knowledge* in chapter seven identified that information processing, related to methods of delivery and perceived relevance, was important for participants, and chapter eight, *fractured application*, illustrated that knowledge or statement of intention did not always translate into practice. The data revealed that while mothers were generally compliant with safe sleep recommendations during the early postnatal weeks, as the infant aged and in particular, when they outgrew the Moses basket, as maternal confidence increased and professional contact withdrew, infants were more likely to be exposed to practices that increased risk for them. The chapter concludes by presenting an enhanced version of Filiano and Kinney's (1996) triple-risk hypothesis to explain the emergent theories generated from this inductive research, adding a new domain of '*sociological vulnerability*'.

10.1 What is the lived experience of young first-time mothers with an infant up to the age of six months?

10.1.1 Context is 'Adolescence'

The participants were embroiled in the important developmental stage of adolescence while simultaneously negotiating the unexpected transition to motherhood. All of the participants talked of rapid and inevitable change, in terms of them having to grow up quickly, take control of their life, and make important decisions for both themselves and their babies. The findings, however, revealed some conflict for the participants in this transition, and a reluctance to move toward independence while also highlighting the influential relationships the participants had with their parents in this regard (Tweng and Park, 2017). The findings also revealed that in becoming mothers, there was not an automatic transition to becoming an adult; and perhaps the expectations of the participants and those around them, including professionals, may have viewed this as the case. Once mothers, however, there was evidence of more advanced and complex decision-making processes within the data, but the majority of their decision-making abilities and resultant infant-care practices continued to be embedded in adolescent processes (Blakemore, 2017; Sawyer et al., 2018).

The subordinate themes of *growing up*, *becoming a mum* and *relationships* all demonstrate the impact that both transition from adolescent to adult, and adolescent to mother, had on their lives during the period that the interviews took place. Understanding that adolescence was the context for interpreting the data and answering the research questions about their knowledge and understanding of risk reduction for SIDS and their application of safe sleep information is critical. Two main components related to this developmental stage, or context, are of interest in answering the secondary research questions, these are *relationships*, how they influenced identity and impacted the decision-making and infant-care practice of the participants; and *adolescent brain development*, which may have influenced their ability to process information and make decisions.

Adolescence includes the years between puberty and adulthood and is generally divided into three stages: early adolescence, approximately eleven to fourteen;

middle adolescence, ages fifteen to seventeen; and late adolescence, ages eighteen to twenty-one (Forfar et al., 2003). Adolescence is characterised by both physiological change and psychosocial transition and progression toward taking on adult roles and independence. Puberty is considered the onset of this developmental phase; however, there is evidence that puberty is beginning earlier, and neuroscience is establishing that the brain continues to develop and change beyond the currently accepted endpoint of adolescence, into the late twenties. Therefore, defining this developmental stage, in terms of age, is increasingly difficult, may be much longer than previously understood (Tweng and Park, 2017), and now requires redefining (Blakemore, 2017; McDonagh, 2018; Sawyer et al., 2018). This 'extension of adolescence' (Tweng and Park, 2017) was evident within my data, demonstrated by a reluctance to 'grow up and become independent' but wanting to be validated as a mother and responsible adult, while still being cared for within the family home.

Interestingly, data revealed that the new grandparents were equally complicit in encouraging or maintaining 'dependence' in their daughters; and although one may consider the extension of adolescence in relation to economic factors, such as not being able to afford to move out of the family home, none of the participants identified financial issues as a problem. Instead, there was an expectation that their parents would continue to support them, and indeed, the parents appeared to share this expectation. While this social shift of extended adolescence has been documented in the child development literature (Sawyer et al., 2018; Tweng and Park, 2017), I did not find any literature documenting the impact of this phenomenon on adolescent parenting. Therefore, this social shift may be important in terms of its influence on infant-care practices of the future. Although this was a small sample, the depth and quality of data in support of this phenomenon may be a novel finding; the impact of living at home and having children, for adolescents and older young mothers, is that their parents continue to support and care for both the young mother and her infant. This suggests that some adolescents are less well prepared for early parenthood than previous generations, and as such, the new grandparents are taking on an extended role of parenting.

The main characteristics of adolescent brain development include increased decision-making and abstract thinking skills, developing a sense of connectedness through peer relationships, the search for self and establishment of identity and the move towards independence (Forfar et al., 2003). There are a variety of theories and models that locate adolescence as a critical developmental period in the lifespan (Erickson, 1995; Piaget, 1954; Vygotsky, 1978). Erikson's epigenetic approach describes the requirement for sequential progress through eight stages, each stage presenting a psychosocial 'crisis' to be resolved to construct an individual's personality. Stage five identifies that finding a sense of self and developing a personal identity are critical developmental tasks during adolescence, and failure to achieve this can result in role confusion and a lack of understanding of self and one's role in society and relationships (Erikson, 1995; Stevens, 1983). This negotiation of identity crisis was evident particularly for the younger participants, Sophia and Mia.

Identity and relationships

Identity, particularly related to peer group relationships, was a factor for all participants and threaded through several themes. Sophia and Mia reported a significant change in their relationships with their peers, which subtly highlights a shift in their identity. Sophia identifies that her friends were more immature compared to herself, and was increasingly isolated by this difference, forcing her to seek out new friends, 'mum friends', to enable her identity to continue to develop. However, these new friends were not considered 'real friends' but did provide validation to her as a mother.

*'I think my social life's decreased a little bit, I think the people I used to hang around with like, before I was pregnant, **that group's kind of changed a lot**, 'cos it's like **they seem really immature compared to me now**. [laughs] So, it's like, oh, **so I've just got like, little 'mum' friends**. [laughs]. [How have your old friends changed?] Like, they just wanna go out all the time and like, 'oh, I'm going to so and so's, and I'm gonna like get drunk'. Oh, that's great, have fun, you wreck your liver! [laughs] You know?'*

(Sophia, 16: IV 3)

Mia similarly states her identity as a mother, constrained by the requirements of this role; she cannot go out and concludes she is no longer 'much fun', she now has to play by 'mum rules' and is therefore different to her old friends. Interestingly, both participants consider their friends as having changed rather than explicitly acknowledging their significant transition to becoming mothers.

'Erm... So, I've still, I've still got my main friends, but I don't like to speak to any of my other friends, it's like, I speak to them if they are like pop up to me [on social media] but otherwise I don't really speak like, to them. [Why is that?] Erm... 'cos I don't go out as much and I'm not as fun... [laughs] I'm a mum, I've got mum rules [laughs]. [Do you feel different, now you are a mum?] Erm... I don't know, I don't really feel, feel different, I still feel like me just with a kid, just me really. [But different from your friends?] Definitely.'

(Mia, 16: IV 2)

In contrast to Mia and Sophia, Evie and Ruby, being slightly older, appear more confident in who they are as individuals and express being ready to move into motherhood. Both older mothers had been working when they got pregnant, and described a different nature of peer relationship, referring to one or two meaningful friendships, and are assured of how these relationships fit into their lives and appear more mature and enduring.

'My best friend, she's godmother and lives in L, but she'll come down and my friends will come here, and we've got huge family,'

(Evie, 19: IV 1)

'One of my friends is now having a baby, she's due in October, so when he's here we can have little play dates and stuff, but she, she comes round and she's supportive too.'

(Ruby, 18: IV 2)

These examples illustrate that for the younger participants, identity was more fragile, they were still working out who they were, and appeared 'lost' and isolated from their peer group, without 'real friends'; while the older participants had a clearer understanding of who they were and where they fitted in society. As

identity is a key developmental task of adolescence, these younger mothers had not identified who they were yet, and although they could state future goals and were aspirational (Rolfe, 2008), they were defining their identity in terms of motherhood and adult responsibilities.

'I'm excited to see what I'm going to be like in the future and where it's gonna all progress. I wanna move out soon, so I think, as soon as I've got college out of the way, I'm gonna try and do work on the days I'm not at college, save up some money, then just get a little flat or something.'

(Sophia, 16: IV 3)

Mia's quotation reveals some regret at not knowing herself before she was a mother. This issue was also identified in studies with 16 and 17-year-old mothers by Rolfe (2008) and Lease (2014).

'Erm, I like being a mum, but... I don't regret it, but I wish I'd had him later. Where I've had like a job and obviously like got my own little house and have a little family, erm, but I don't really regret it, at all'

(Mia, 16: IV 2)

Mia and Sophia met when they transferred to a school for pregnant school girls. This specialist service provided for the continuation of their education and infant-care facilities were available on site. However, this service was being closed down at the time of this research, and there was uncertainty about the future model of service provision for the city. As part of this resource consolidation, a number of children's centres in the most deprived areas of the city were also either amalgamated or closed. As specialist service provision is reduced, this impacts on opportunities for these young women to socialise and share experiences with other young mothers and curtails access to professional support and current health education (Allen, 2011; Rallings, 2014; Sammons et al., 2015). Fishbein and Ajzan (1975) argue that external factors such as social acceptance of behaviours as the 'norm' and behaviour associated with peer group activity and identity have

a significant influence on an individual's motivation and ability to engage with behaviour change. Without these facilities that bring young mothers together, as a new peer group, providing an opportunity not only for social support and friendship but for health education and parenting support, there is a risk that young mothers will remain isolated, and health and wellbeing outcomes for them and their infants may be poorer as a result (Allan, 2001; Sammons et al., 2015). This social isolation increases the likelihood of well-intentioned but outdated and unsafe infant-care advice from family and friends to perpetuate; and as young mothers remain isolated, they may also experience a stall to their identity development, essentially struggling to overcome the psychosocial 'crisis' in resolving their identity which may increase the possibility of mental health issues later (Erikson, 1995; Sammons et al., 2015).

Although both the younger participants were in receipt of the family nurse partnership service, this provision is delivered by individual home visits and does not alleviate the isolation that young mothers experience; this was illustrated by both younger participants expressing that they felt 'trapped in their bedrooms', and simple activities such as going out, were now like 'expeditions'. The younger participants were also more likely to describe how hard the mothering role was, compared to the older participants who viewed it as easier than expected.

Other developmental differences were noted between the older and younger participants. Older participants appeared to have more realistic expectations of motherhood and were more likely to have peers or family who had had babies recently; they acknowledged having to re-order priorities and stated that they were ready to give up partying, viewing themselves ready for the next stage, and both stated that they were in stable relationships with the infants' father. Although Evie and Ruby were *stating* these more mature views, interview data suggest that their actions were sometimes otherwise; for example, when the new grandparents stepped in to care for the infants when the young mothers wanted to go out drinking. Despite this contradiction, the older participants appeared to have a more established sense of self and were able to separate their pre-pregnant identity and their identity as a mother. This quotation from Evie identifies a delineation between her younger, pre-pregnant self and her transition

to identify as a mother; although she uses the pregnancy as a catalyst to change her behaviour and actually seems to 'blame' the baby, she is consciously transitioning from her rebellious non-compliant 'teen identity' to that of 'responsible mother'.

*'Well the pregnancy... it was obviously her, 'cos it makes your hormones all crazy, so a lot of it was her, but before, normally it was OK but it had its up and down days, but I think that is just normal, but **when I was younger it was terrible [diabetes management], that's because I just wanted to do what was normal and do what I wanted to do. But now it's fine.'***

(Evie, 19: IV 3)

Another interesting feature arising from the data was the apparent conflict the participants expressed between wanting to grow up and be validated as a good mother and adult while wanting to remain dependent on their parents. There was an expectation by all participants that some form of co-parenting would take place, shared between themselves and the new grandparents, but generally, the expectation was that it would be on the terms of the young mother, a view which may not always be shared by the new grandparent/s. All the participants beyond the first interview were living at home and had not experienced independence; indeed, all were still having meals provided, their washing and ironing done and viewed their parents as a taxi service; and although Evie and Ruby had been working, there was an expectation that their parents would also continue to support them financially. Interestingly, a lack of financial resources was not highlighted as an issue from the data. The participant's parents appeared happy to continue to support their offspring financially, and in Ruby's case, her partner was also living in the family home; this provides evidence in support of the social shift of extended adolescence, which is also recognised as affecting the parents of adolescents (Tweng and Park, 2017). Although family, and the new grandparent/s in particular, can be a source of valuable support for the new mother, this 'overparenting' can be experienced as overbearing and undermining for the young mother who is learning her new role. There is also the potential for the new

grandparents to provide inadvertent outdated advice and perpetuate unsafe practice, however well-intentioned.

Of note, was that this 'conflict' was perpetuated by new grandparents still treating the participants as 'children'. The adolescent stage is also about *parents* renegotiating their role, and supporting their offspring toward independence (Simpson, 2001). However, the new grandparents, at times, were parenting both mum and baby and this was accepted, and occasionally demanded by the participant. This example with Evie illustrates her identity as the 'baby' of the family may be challenged by the arrival of the new baby but is protected by Evie's mum who stated that Evie would '*always be her baby*', even though Evie is 19; this behaviour reinforces the delayed requirement to 'grow up' and was perpetuated by the participants' parents. Evie also had no plans to move out of the family home, although she had a stable relationship with her partner, neither expected to be living independently until their mid to late twenties, and Evie had also expressed that she would have her second child while still living with her parents.

'I'm living here with my mum, dad and my brother. So, got all the help, they were very excited as well, but I wouldn't move out anyway 'cos I'm bit of like erm... I'm glad I've got my mum there, so I know she'll help me, you know she's had four children, so she like knows what she's doing, and I think I need that help'
(Evie, 19: IV 1)

Within this perpetuated 'parent-adolescent' relationship, there is familiar support and role identity, but also the potential to undermine the new mother. With the maturation of identity comes agency (Bandura, 1977); however, what my data revealed was more akin to the adolescent-parent 'battle of will'. The new grandparents perhaps think they know best and have had experience of parenting. The young mum has no experience and may be viewed as still a child who is unable to make her own decisions, or the right decisions, which possibly relates to '*teen brain*' functioning. Within my data there was evidence of inconsistency of decision-making, and although a more natural condition of adolescence, this may present as 'scatty' and unreliable to the new grandparent. There may also be a

mistrust of professionals with new and different advice to what the new grandmother did (Smithbattle, 2006). In this 'battle of will', the new grandparent may push their point, and the young mum may capitulate when over-tired and stressed by her new and unfamiliar role, and not having the correct information, or when lacking the confidence to confront her parent. This example illustrates that Mia's mum will 'take over' infant care. Perhaps she feels she is giving her daughter a break or to catch up on sleep and is 'helping':

*'Erm.. like night feeds, say if she's not working, like after, then, **she'll get up and like feed him. She won't wake me up, she'll just get up and feed him.**'*

(Mia, 16: IV 2)

However, when she does not think Mia is doing the right thing, she steps in and occasionally takes over and goes against Mia's wishes:

*'Like, L's got like a really erm, gunky eye sometimes, and the doctor told me to use boiled water with salt. **And my mum was like, 'no you can use boiled milk'. But I said 'no, I'm not doing that', but she does it when I'm not there anyway.** [How does that make you feel?] I don't know. Well, if it helps then, fine I guess, but... I don't know. [Do you feel confident to challenge her?] Yeah, and tell her, let me just do what I'm doing. She's like, 'ok, whatever.'*

(Mia, 16: IV 2)

Smithbattle (2006) describes these situations as family legacies, which were explored further in chapter two. When young mothers are overwhelmed by their role and in the presence of strong parenting philosophy, they are more likely to adapt, or give in to the 'family way of doing things', which may not be based on current recommendations, and may be contrary to the wishes of the new young mother. These family legacies, and the culture within the family can have a significant influence on the young mother's ability to embed current and recommended infant-care practices and risk reduction measures into their own infant care. Therefore, the impact of the relationships within the family are significant, particularly when the young mother is still living in the family home.

This situation can be challenging for professionals to negotiate, particularly if they are unaware of the family 'undercurrent'. Also, recognising and negotiating the parent-adolescent relationship presents a challenge. There is a primary need for professionals to engage with the parent, but it may be advantageous to include the new grandparent. This may result in the professional feeling conflicted; it is important to develop a relationship with the client and treat them with respect without potentially undermining them by including the new grandparent and underlying this, there may be tensions within the parent-adolescent relationship to be considered. Achieving a balance here is critical to the ongoing influence the professional has in imparting knowledge and information and influencing change. It is also important to appreciate that in becoming a mother, the adolescent does not automatically transition to the sophisticated information processing and decision-making functioning as an adult, and as such professionals need to be mindful of how adolescent brain development impacts these functions.

Adolescent brain development

During adolescence the brain undergoes significant remodelling or 'pruning' of unused neural pathways in the 'thinking' and 'processing' areas, to increase brain efficiency. This pruning process begins at the back of the brain and moves forward to the pre-frontal cortex (PFC). The PFC controls executive functioning and is concerned with decision-making, problem-solving, future planning, understanding consequences and impulse control; it is the final area to be remodelled, and the remodelling process can take many years to complete. In the interim, adolescents may rely on a different area of the brain, the amygdala, to solve problems and make decisions. The amygdala is associated with more emotional, impulsive and instinctive or reactive behaviour (Blakemore, 2017; Sawyer et al., 2012). Although adolescents are developing the ability to make rational and considered decisions, some of their decisions will still be based on more emotional processes and therefore appear (or are) illogical, impulsive or reactive (Luciana and Collins, 2012). Evidence of this vacillation between rational and impulsive or reactive decision-making is captured in the findings chapters in the '*teen brain/ teen attitude*' sections. While the theme is 'docked' under the superordinate theme of

transition, there is evidence that the influence of this developmental stage permeates several other themes and its influences are evident, which is why adolescence provides the context for considering the secondary research questions. For example, all participants were able to identify that smoking was harmful to the foetus, that changes were required to their mainly high sugar, ‘fast food’ diets, all could list some of the benefits of breastfeeding and similarly, all could list some of the safe sleep messages. However, some of the decisions they talked about lacked explicit rationale, were supported by flawed, incomplete or ‘modified to suit’ knowledge, participants were unable to identify why they were making decisions; or they were ‘instructed’ by someone they trusted, and therefore did not question or challenge the basis of the instruction; a finding shared in Pease’s study (2017a). These first two quotations illustrate limited consideration of options or understanding of the rationale for their decisions,

[how did you choose your cot?] ‘I just bought it... basically, if you see something you need to buy, then buy... then just buy it’

[Where will she sleep?] Next to my bed [how did you decide that?] Just thought of it’
(Grace, 17: IV 1)

‘I just liked it, so I bought it, I didn’t look into anything like Google, my auntie’s [aged 25] just recently had a baby and she like Googles everything, it’s gotta be like perfect detail of what it does and why this is going to be good... but I didn’t do that, I just, I liked it, so I just bought it.’
(Ruby, 18: IV 1)

While here, Mia does not question the instruction from her midwife but is unaware why she should follow this instruction,

[Is there anything that you’ll change about the Moses baskets?] ‘No..., oh... the mattress [laughs]’ [why?] ‘Cos I have to.... ‘cos I’ve been told to [laughs] by the midwife. Erm, well, she said a new born baby needs a new mattress [why was that?] erm.... not sure’
(Mia, 16: IV 1)

In these last two quotations, Ruby and Evie transfer responsibility or 'blame' to their infants for 'scuppering' their attempts to breastfeed. Ruby conveys that really, she just cannot be bothered to breastfeed, but was aware of the 'right thing to do' and had 'intended' to do it, but gives up pretty quickly when confronted with the reality,

*'Yeah, I was just adamant that I was going to breastfeed, but when she come out and she was hungry, I just said give her a bottle, and I couldn't do it. She's, she couldn't latch on and she was struggling, so [did you have much help from the midwives?] Yeah, they helped but, I just, **she was just so hungry, I just said just give her a bottle, I can try [breastfeeding] later'***

(Ruby, 18: IV 2)

And, Evie creates quite a dramatic and physiologically incorrect scenario, with the infant at the centre of the drama, and the reason for the breastfeeding outcome,

*'So, I breastfed, erm.. **she didn't like it.. AT ALL**, [how long did you ..?] Two and a half weeks, **she hated it**. She wouldn't latch on, and when she did she'd scream and wouldn't do anything, so then I expressed and she had my milk but because **then I was ill** 'cos my bloods were low and my iron levels were really low, **my milk just cut out, which is a bit annoying** but she had my milk for two and a half weeks so I mean she got the best of my milk anyway, **but it was a bit annoying that she didn't like it... she really just didn't like it at all**, but then **again she was born 3 weeks before her actual due date, so she was obviously behind everyone else, so, I'm not surprised that she didn't really get on with it**, which is like I say a bit of a shame but she just prefers, **she just prefers the bottle** she was fine with my milk in a bottle but obviously that cut out which was very irritating but there was **obviously nothing I could do** about that just **because I was ill, it just completely cut out**, [what did the midwife say?] So they said you can't really reverse it once it cuts out **so there was nothing I could do**, so I tried to use a breast pump to try to get it to come back again but it wasn't working at all so there was nothing I could do which did annoy me, but at least she got two and a half weeks so she got something which is the main thing.'*

(Evie, 19: IV 2)

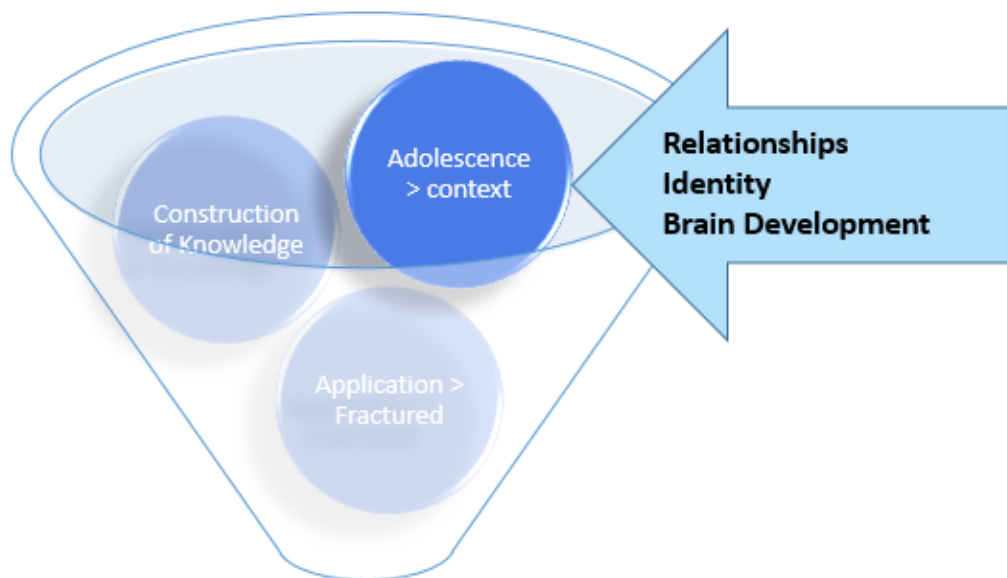
These are all features of adolescent brain functioning and may influence their decision-making and resultant behaviour; these quotations are just an example

from the findings chapters that illustrate their developing, ‘toing and froing’ between their emotional and reactive (amygdala) and PFC executive functioning processes. Understanding the modus operandi of the adolescent is important as it impacts on how information shared with them is received and processed, and ultimately how that knowledge is translated and applied.

Transition Summary

The diagram below represents the emerging picture of how the context of adolescence provides a lens through which the secondary research questions were answered.

Figure 10.1: Adolescence as the context for decision-making related to infant-care practices



Participants are adolescents first. This key developmental stage was superimposed with the transition to motherhood; adolescents do not necessarily become adults when they become mothers. Key themes were relationships and identity, and adolescent brain development as factors influencing decision-making, behaviour and infant-care practices. Adolescence, therefore, may play a key role in the ability of the young mother to receive and process information and gather knowledge related to the task of parenting and risk reduction in the infant sleep environment in particular.

10.2 What do mothers understand about what constitutes safe sleep for their infant?

Having derived the context for the participants, this provided the lens through which to interpret the data to answer the secondary questions. A number of themes were revealed during data analysis, such as participants' *knowledge* and awareness of SIDS risk factors, and issues with information *delivery - method, medium and timing*, and *relevance* of intended key messages, and are of particular interest. How participants received and processed information may have been influenced by adolescence and *teen brain* functioning.

Knowledge

Knowledge acquisition appeared fragmented or selective, and while participants appeared to have a reasonable knowledge base when explored further, their 'stated knowledge' was occasionally inaccurate, incomplete or lacked rationale. Two separate studies investigating low-income mothers' knowledge of safe sleep and compliance with supine sleep position, Mosely, Stokes and Ulmer (2007) and Fastring, Mayfield-Johnson and Madison (2017), both identified that fragmented knowledge was an issue. While Northington et al. (2011), in a study of information sources, found that infant-care advice provided by family elders was often inaccurate; and a study by Byrnes (2002) found that adolescents were more likely to seek information from familiar inexperienced sources, such as peers, rather than unfamiliar experts. When questioned specifically about smoking, there was variability between participants in their knowledge of risk and harm. All were able to identify that smoking during pregnancy was a risk and that a smoke-free environment after birth was desirable, but each participant expressed that risk differently. All participants stopped smoking during early pregnancy except Sophia, who stated that she had 'cut down'. This may account for participants not recalling specific risks for smoking, as they did not see this as relevant since they had quit smoking. Sophia and Mia, both receiving the FNP service, demonstrated the most comprehensive knowledge of risk related to smoking, however, Sophia was still unable to quit; defending her smoking as 'me time' which may be related to her pre-pregnancy identity and perhaps subconsciously, Sophia felt the need to

preserve her emerging identity. In order to reconcile her behaviour, Sophia appeared to minimise the risks of smoking and manipulated the information to suit her world view, using humour, possibly to deflect further exploration of her behaviour. However, Sophia was also living in a household of adult smokers and, aged 16, may not have felt able to challenge this behaviour or modify the sleep environment for her infant.

Similarly, for breastfeeding, knowledge of benefits was variable between participants, but all intended to 'try' to breastfeed as they believed this was best for their infant. The breastfeeding issue was discussed in chapter six (6.1.4), and perhaps demonstrates more about their decision-making processes and attitude as an important predictor of behaviour. While all expressed a desire to breastfeed, there was a lack of 'commitment' in their narrative, which was particularly noteworthy in the postnatal interviews. This lack of commitment was identified as a predictor of failure to sustain breastfeeding in a study by Nesbitt et al. (2012); and Kadakia (2015) identified that the initiation and maintenance of breastfeeding in young mothers was influenced by pain, a lack of support and scepticism about benefits of breastfeeding. For my participants, experiencing pain and the challenges of breastfeeding may have influenced their decision to change to bottle feeding, and perhaps reflecting the immaturity of the adolescent in being unable to see the 'bigger picture' and understand the long term benefits to the short term difficulties in establishing breastfeeding. Related to this, is the perception or reality experienced by young mothers, of public and professional judgement (Duncan, 2007; Ellis-Sloan, 2014; Macvarish, 2010b; Mills et al., 2012); in opting to bottle feed, this is something tangible for the young mother to understand and 'show' to the world. Also, the issue of body confidence in adolescents may have a significant influence on her ability to breastfeed in public, or even in the presence of her family; Brown, Rance and Warren (2015) identified that this was a significant factor which influenced both initiation and duration of breastfeeding. This 'embarrassment' was expressed by Mia who did not want to breastfeed at home due to the presence of her mother's partner, but equally when she spent long periods of time in her bedroom, she felt 'trapped' and isolated there; these are all factors that are likely to have influenced her decision to bottle feed. This

reiterates the point that if young mothers lack opportunities to socialise with other young mothers, and in situations where they can access current health education and support, then these difficult and challenging tasks of motherhood can be quickly discarded in favour of easier practices such as bottle feeding. Understanding some of these issues about what life is like, and how adolescent mothers make decisions and what influences these, are important considerations for professionals in supporting desirable and sustainable infant-care practices.

After identifying smoking and breastfeeding as risky and protective respectively, other risk factors for SIDS were more difficult to access. None of the participants explicitly mentioned SUDI, SIDS or other common descriptors such as 'cot death'. This differs from Pease's study (2017), who found that even in the high-risk group, 46% of mothers were worried about SIDS. However, Pease's participants were selected from a broader age range, which may have an impact on this issue, either by younger mothers having less awareness of SIDS or having a 'teen attitude' of 'it won't happen to me', a particular adolescent characteristic which Christie & Viner (2005) label as being 'bulletproof'. Also, Pease asked about SIDS, whereas my approach was driven by participant agenda and perhaps illustrates that my participants were not directly linking safe sleep recommendations and risk reduction advice directly to risk for SIDS. All participants stated that they were aware of the safe sleep messages in general, however, when asked to be specific or list them, each participant could only identify between one to four recommendations, which did not change throughout the serial interviews; a finding shared by Pease (2017a). The risk factors identified, comprised this common core across the participant group: all readily identified the requirement for supine sleep position and identified the risk of co-sleeping, but could not elaborate on the rationale for either recommendation or specific elements that increased the risk of co-sleeping, except for overlying. What my findings did identify was the consistent report and use of the supine sleep position, which is still being identified as inconsistent in other studies (Caraballo et al., 2016; Colson et al., 2017; Pease, 2017a; Zundo and Richards, 2017; Smylie et al., 2014).

*[What position do you put her down in?] on her back [did the midwives tell you that?] I just done that anyway, **no one ever told me, but I'd just naturally do it.***
(Ruby, 18: IV 2)

There was then variability in identifying these next factors, which were expressed across different time point interviews: 'feet to foot', not to overheat the infant and no loose bedding or paraphernalia in the cot. While other recommendations such as room sharing, and pacifier use were either considered the 'norm' or related to convenience rather than as a protective factor for SIDS.

The second interview captured data illustrating that all participants were able to fulfil most of the current safe sleep recommendations, but just did not relate them explicitly to reducing the risk for SIDS. This, I would argue, is an important finding; perhaps the main safe sleep recommendations have become consolidated into usual infant-care practice, and therefore mothers do not 'consciously link' the safe sleep recommendations with SIDS. However, while there may be evidence to support that recommendations have become embedded into usual infant-care practice, the reality is that participants were unaware of the rationale for most of these practices. Therefore, they may be inclined to alter and adapt seemingly safe practices in attempting to resolve a problem, such as placing an unwell infant on their side or selecting the prone sleep position to settle an infant. There was also some confusion between different recommendations, particularly between loose bedding and overheating. In the early interviews, participants stated that blankets should be tucked in and care taken not to allow the infant to overheat. By the later interviews, blankets were generally untucked (observed and stated by participants) to allow the infant to kick them off if they became hot. So, although participants attempted to apply safe sleep recommendations, they were getting the messages confused and adapting the sleep environment, influenced by a need to accommodate the growing and developing infant, and using a pragmatic approach of 'what worked' (Pease, 2015). This confusion, in part, may be the result of information overload and messages being lost within an 'information stream' provided to participants (Campitelli and Gobet, 2010); or if advice is incomplete or

conflicts with personal beliefs or experience, they may be more likely to rely on their interpretation of the information (Collins et al., 2011; Smithbattle, 2006).

While some of these information processing issues may lie with the young mother, influenced by the developmental stage of adolescence; professionals perhaps need to review their methods of information delivery, and service providers need to consider the most appropriate and effective model of service delivery. Ensuring that messages are clear and simple and are delivered in conversation with the mother, may alleviate some of this confusion and has the potential to impact behaviour when underpinned with clear explanation and checking of mothers understanding (Moon and Hauck, 2015; Moon et al., 2010; Pease et al., 2017a); and may require more frequent professional face-to-face contact in this vulnerable group of parents.

Information Delivery – method, medium and timing

Given that none of the participants mentioned SUDI or SIDS explicitly, and they were often unable to identify why they were engaging in certain infant-care practices, suggests that perhaps professionals are not being explicit with their explanations of risk reduction measures and safe sleep advice, or may not always specifically explain the rationale behind the recommendation. This may be related to the perception that making explicit any risk of SIDS may be upsetting for the young mother; particularly given the comparative rarity of SIDS occurrence. Alternatively, it may be easier to deliver a list of ‘do’s and don’ts’ or give a leaflet to save time or deflect questions about the recommendations, particularly if the professional is unsure of the current evidence base themselves. This is, however, conjecture and further research would be required to ascertain how professionals approach these matters and how they relate information to adolescent mothers. The impact of not explaining why certain practices are recommended may have undesirable consequences, and Sophia sums this up:

*"Cos I will say well, why do I need to do that? So, then it's, you know I do **feel** if there wasn't a re[ason], if it wasn't explained, I wouldn't think I'd do it as much [OK.] Like, I don't think I'd listen as much. [Yeah?] I'd just think 'oh they're just saying that', or 'I can't do that much damage if I don't', you know?*

(Sophia, 16: IV 3)

While all participants had reasonably good knowledge of breastfeeding benefits, and the harms of smoking in pregnancy, this is likely to be due to regular contact with midwives during the antenatal period when these messages are consistently and frequently repeated. Hawkins et al. (2010) and Mills et al. (2012) both identified that the most effective health education strategies were interactive and responsive to the client; the participant's relationship with their midwife provided the opportunity for responsive and frequent health education exchange; however, my participants were not receptive to parenting information during the antenatal period. Participants revealed that they spontaneously sought information when considering their decision on breastfeeding, from sources such as the Internet, leaflets and were influenced by their own mother's feeding choice; a finding shared with Nesbitt et al. (2012). Although participants did not persist with breastfeeding, they all 'tried' and were influenced by the idea that they were doing the best for their baby. Given the nature of functioning of the adolescent brain, this 'drip feed' of information and motivating interest by acknowledging what is a priority for them at that moment in time, may foster a greater engagement with information procurement by the adolescent mother (Mills et al., 2012; Simpson, 2001). Recent studies investigating effective methods to deliver health education messages found that using text-messaging tailored to a specific health education message was effective in changing behaviour (Hall, Cole-Lewis and Bernhardt, 2015; Hawkins et al., 2008); and a meta-analysis of text-messaging interventions by Head et al. (2013), found this to be the most effective method of health education, particularly with younger age groups. Moon et al. (2017 a & b) also found that using text messages supported mothers' engagement with safe sleep information and adherence to safe sleep recommendations. It is likely that using text-messaging to 'drip feed' reminders of safe practice may be a valuable and

scalable strategy in supporting young mothers to adhere to safe sleep recommendations and, would likely be an acceptable and familiar method of communication to use with adolescent mothers, as reported in these studies.

Relevance

How information is delivered can influence how participants receive the message and the relevance they place on the topic. Participants' knowledge acquisition was related to both their adolescent developmental stage and the requirement to 'grow up' and behave like an adult and mother. Adolescent brain functioning influences attention span, interest, and therefore relevance, the ability to process and retain information, and understanding of cause and effect (Blakemore, 2018; Sawyer, 2012). As pregnancy was a new and individual experience for participants, engagement with their midwife represented a significant relationship and underpinned their transition to motherhood; participants wanted information on pregnancy as it was perceived as relevant. Information on other topics, and specifically parenting and safe sleep, even when delivered by the trusted source of the midwife, appeared irrelevant antenatally.

'[Would sleep information have been useful before she was born?] Erm... nah, because I'd have probably forgot anyway, so once she's here it was just better, yeah, you can actually put it into action. But it's all so overwhelming, you don't remember half of it, so yeah, I'm not bothered about that.'

(Ruby, 18: IV 2)

While participants were happy to ask for, and seek out information about pregnancy, perhaps to appear ready for motherhood and 'grown-up', participants may not ask for, or consider parenting information as relevant. This is perhaps because they do not want to admit that they do not know something for fear of being judged too young to be a mother (Duncan, 2007; Ellis-Sloan, 2014; Macvarish, 2010b), they think they know it already, 'teen attitude' (Blakemore, 2018; Christie and Viner, 2005; Sawyer, 2012), or they disengage because they experience information delivery as didactic, overwhelming and irrelevant

(Dansereau, Knight and Flynn, 2013; Pease et al., 2017b). Pease (2017b) also identified that information delivery methods were particularly important, documenting that mothers experienced information delivery from professionals as ‘telling’, with little opportunity for checking understanding or asking questions. Evie and Ruby frequently stated that they knew how to care for their infant and appeared less receptive to being given parenting information.

*‘I do just sort of switch off to some people, only **because some people sound like they are telling you**, like what the baby needs and **obviously I’m like thanks, but I know.**’*
(Evie, 19: I/V 2)

Both were particularly vocal about being overwhelmed by information in the immediate postnatal period. Information was prioritised and rapidly sorted into relevant and irrelevant categories, with the irrelevant ‘side-lined’ or discarded.

*‘They’ve given me like, **loads of leaflets, they’ve piled me up with loads of leaflets.** But that’s really about it, I mean **they haven’t said anything verbally**, they said if I need any help, just ask. Yeah, a lot of the stuff has just been leaflets.’*
(Evie, 19: IV 2)

*‘[What about safe sleep advice?] **Not really, no I just sort of switch off, I don’t listen at the best of times** [laughs] So no, I’ve not looked at the sleep ones’.*
(Evie, 19: IV 2)

*‘But it’s **all so overwhelming**, you **don’t remember half of it**, so yeah, I’m **not bothered about that stuff** [information]’*
(Ruby, 18: I/V 2)

These two quotations from Evie may serve to illustrate what has been described as ‘the fickle adolescent brain’ (Blakemore, 2018; Sawyer, 2012); she is overwhelmed by leaflets and suggests she may find verbal information more useful, but then states later in the same interview, that she ‘switches off’ and ‘doesn’t listen at the best of times’. In comparison, Sophia was receptive to advice and support from all sources and was able to use the leaflets provided by her

family nurse to support her decision-making and to challenge outdated advice. Trying to negotiate how and when to achieve effective information delivery with adolescent mothers is therefore challenging. The timing of information delivery was identified as a common theme; participants talked of ‘checking’ their practice with health professionals or relatives, implying that some practices were already established, but also that some of the practices had been ‘worked out’ or were ‘instinctive’ rather than explicitly following any recommendations, a finding also reported by Caraballo et al. (2016).

‘[What information have you had from your midwife?] Well, she just gave me advice on how to do the bottles and make sure they were OK, and I was like, ‘I knew how to do that’ don’t worry’. But that’s pretty much it.’

(Sophia, 16: IV 2)

*‘[Have you needed child-care advice?] Not really. I mean, I feel like **it’s just all common sense, it’s all just come quite naturally**, that sounds really like bad, but it is all just, perhaps it’s like ‘cos she’s an easy baby to look after.’*

(Evie, 19: IV 3)

While early postnatal contact with the midwife resolved some issues, and Mia and Sophia had ongoing contact from their family nurse, this did not safeguard against practices changing as the infant aged, and the mother gained confidence. Although the provision of leaflets potentially counters the lack of direct professional contact, with the assumption that information is available to the mother, both Evie and Ruby had discarded the leaflets they did not consider relevant, and perhaps would never think of referring to them. With the withdrawal of professional home visiting for Ruby and Evie, valuable opportunities to identify and correct potentially unsafe practice were lost, and without ‘easy’ access to health professionals, ‘grandma’ or the extended family provided a convenient and trusted, but not necessarily expert, resource (Byrnes, 2002).

'[Have you seen any health professionals since last interview?] No, literally no-one. Apart from my health visitor, but that was when I was in hospital and she didn't come round to see, she just phoned to see if she was out.'

(Evie, 19: IV 3)

'My family's quite big and we've always like had little children around so I've never not been around children, so no-one really needed to tell me what was going to happen because I kind of just know already from being around others'

(Ruby, 18: IV 2)

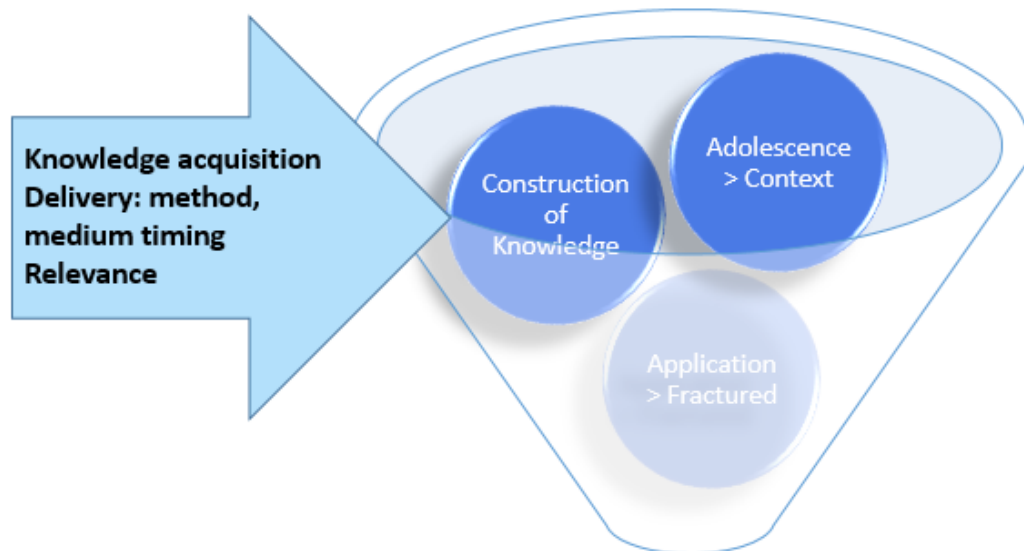
This section demonstrates that consistent, simple and repeated messages are required, and the following section identifies that as the infant ages, the sleep environment changes. There is, therefore, a requirement for ongoing dynamic assessment of knowledge and risk, with assessment ideally based on conversation and observation to achieve an effective outcome, with the potential use of text-messaging 'reminders' between contacts to reinforce safe behaviour. The quality and delivery of information is a key factor in influencing knowledge acquisition, and the ability and inclination of the participant to process, and ultimately apply that knowledge. However, knowledge acquisition and processing in adolescent mothers is likely influenced by their evolving brain development, and some of their decision-making may revert to reactive rather than a logical risk assessed, problem-solving approach.

Information Summary

Knowledge was fragmented and inaccurate, and participants lacked an understanding of the rationale for safe sleep recommendations. This may be related to the quality and method of information provision, their adolescent brain functioning or more likely, a combination of both. The quality and delivery of information is a key factor in influencing knowledge acquisition. Clear, simple messages repeatedly delivered and considered as relevant by the young mothers, were more likely to be recalled. The method and delivery of information influence the ability and inclination of the participant to process, and ultimately apply that knowledge. A 'drip feed' and interactive approach, and the use of text messaging

have been identified as the most effective strategies for health education with younger client groups.

Figure 10. 2: The influence of information delivery and processing on decision-making related to infant-care practices



Having identified some of the issues related to the acquisition of knowledge and information, the superordinate theme of *fractured application* in chapter eight identified that the *translation* of knowledge into practice can be problematic for the adolescent mother and illustrated the contradiction between what mothers said they did and what they actually did. The following section discusses the key themes in relation to the final research question

10.3 What influences their decision-making around infant-care practices related to the sleep environment?

The previous section identified that participants' knowledge was fragmented and incomplete, and some safe sleep messages had become confused: even where stated knowledge appeared accurate, and there was an intention to follow safe sleep recommendations, application (or behaviour) was not always compliant with recommendations or, corresponded with what participants said they did. Therefore, knowledge and intention were not necessarily a predictor of behaviour (Bandura, 1977); and decision-making processes vacillated between reactive and considered; however, the 'considered' decisions were often based on inaccurate or adapted knowledge and information (Amaya-Amaya, Ryan and San Miguel,

2005; Luciana and Collins; 2012). The findings revealed a 'disconnect' between stated knowledge and application, and infant-care practices appeared to be influenced by the maternal perception of *comfort*, *convenience* and *what worked*. Chapter eight, '*fractured application*', illustrated the challenges for these young mothers in consistently applying what knowledge they had during the early postnatal period, and how they adapted and modified information during their decision-making processes to suit their needs as the infant aged, and what influenced this.

10.3.1 Influencing Factors

Decision-making

Several decision-making models were introduced in chapter two. For example, Rational Choice Theory suggests decision makers will almost always follow the same algorithm for every decision irrespective of context, however, the more complex the choice, the more likely the departure from the expected decision pathway (Amaya-Amaya, Ryan and San Miguel, 2005). Psychologists, however, questioned these prescriptive models, suggesting that in the real world these processes are cumbersome and less efficient if applied to every decision; nor do these models take account of the multidimensional factors that influence an individual's decision-making capability, adequately reflect cognitive functioning or consider external environmental influences. Two broad cognitive decision-making models were proposed to counter the rational choice models and were reviewed in chapter two: the dual system and bounded rationality theory (Simon, 1972). The dual system focuses on the individual's experience and analytical ability as the components of decision-making; however, this model does not take account of the individual's cognitive capacity for adaptation to their environment or that the environment may significantly influence their decision-making. Bounded rationality introduces the 'adequacy' criterion (Simon, 1972); suggesting that decision-making is limited by a number of factors such as cognitive ability, the time and information available, and the importance of the decision. Given this complexity and the limitations of operating in the real world, people may only seek a satisfactory solution; they develop an 'adequacy' criterion and may choose the

first option that fulfils this; choosing the good enough, not necessarily the best option.

My participants have evidenced each of these models of decision-making. However, I would argue that the data more frequently demonstrated the decision-making processes of the bounded rationality model; participants were adapting to their environment and responding to the changing needs of their infants and applying 'adequacy criteria', which related to doing 'what worked' without considering all of the important elements which may increase risk for their infant. Luciana and Collins (2012) identified that while adolescents were competent in their levels of cognitive executive functioning related to decision-making, their self-regulation was less effective under conditions of stress or multiple and complex decision-making requirements; which supports the vacillation between rational and reactive decisions evidenced within this data. While Dansereau, Knight and Flynn (2013) found that it was necessary to 'teach' adolescents the 'analytical processing' element to support them to make better decisions and involve less 'trial and error'. The findings from both of these studies were applicable to my participants; they required guidance and accurate information to learn to make more consistent and safe decisions, however, due to the combination of their characteristics of adolescence, reduced professional contact and the well-intentioned, but outdated advice of relatives, it was easy to see how participants' infant-care practices arose. By including these decision-making models and relating them to the adolescent mother within this thesis, may support professionals working with this group of parents to understand better the complexities of how decision-making influences adolescent mothers' behaviour, and therefore, how to better communicate with this vulnerable group to deliver relevant and effective health education messages.

Knowledge and Behaviour

While any education strategy aims to provide knowledge and information to support decision-making and move toward a desired behaviour, several studies identify that translation of knowledge or intention, into practice is problematic (Colson et al. 2017; Joyner, Oden, and Moon, 2016; Zundo and Richards, 2017),

and a range of factors can influence this (Azjan, 1975; Bandura, 1977). In a study of 3297 mothers, examining factors associated with infant sleep position, Colson et al. (2017) identified that less than 44% of parents practiced what they intended, finding a correlation in mothers with low educational achievement as intending, but less likely, to adhere to the recommended sleep position. They also identified that factors of attitude and subjective norms were significant in influencing actual behaviour. Similarly, a review of compliance with supine sleep position in low-income families by Zundo and Richards (2017) found that knowledge was not a predictor of behaviour; while almost all participants had some risk awareness, only 30% of infants were positioned supine for sleep. They also found that mothers became less compliant as the infant aged, particularly after three months, a finding mirrored by Lesko (1998) and observed in this study. Joyner, Oden, and Moon (2016) also found that although parents were given information that pacifier use reduced the risk for SIDS, this knowledge did not change their behaviour. The motivation for behaviour in these latter two studies appeared to be driven by maternal beliefs. From my data, decision-making and related behaviour appear pragmatic or reactive, without consideration of consequences, rather than any intention to eschew safety recommendations or due to a strong personal belief. Also, participants in these studies demonstrated an awareness of risk and risk factors, my participants did not make that connection explicitly. I would suggest that while family influences were evident, there are more significant links with the developmental stage of adolescence; that brain functioning, incomplete knowledge influenced by poor explanations and/ or perceived irrelevance, a lack of recall or a 'bulletproof' attitude, were more likely to influence reactive infant-care practices rather than support decisions based on sound rationale. Evidence of stated intention and actual behaviour outcomes in my study revealed similar findings to the studies above; but for breastfeeding, and soft and loose bedding use, rather than infant sleep position, which was generally compliant with recommendations. Interestingly, more traditional infant-care practices such as the infant being encouraged towards 'independence' by self-soothing and falling asleep alone, and sleeping away from the mother, were enduring and expressed as an intentional practice by participants, without

consideration of safe sleep recommendations. These practices are ingrained in traditional parenting culture and are a hang-over from decades of advice and instruction from parenting gurus, which in my experience, is not always evidence-based, but these practices may be very difficult to change.

While all participants gave up breastfeeding, and Sophia continued to smoke, there was evidence of participants complying with simple behavioural messages such as 'back to sleep'. All participants readily stated this message and appeared to comply with it in all sleep circumstances, and as the infant aged; except Evie who liked to have her infant sleep prone on her chest when she was sitting on the sofa – Evie believed that this was safe, as she remained awake. All participants generally appeared compliant with most safe sleep recommendations while the infant was young (up to approximately four weeks old) and sleeping in a Moses basket. Over time, changes in compliance and increased risk were noted for factors such as soft and makeshift sleep surfaces, loose bedding and infants sleeping alone and unchecked for long periods. These findings are contrary to those in Pease's study (2015), who found that although mothers did not always comply with recommendations, they appeared more aware of them than my participants and tried to follow them in most cases; they also stated they regularly checked their infants, which my participants did not do. Of note, Pease interviewed at a single time point, while the longitudinal approach of my study offered a unique opportunity to track infant-care practices over time. This approach may have captured a more realistic 'environmental picture' of the parenting behaviour demonstrated by these adolescents and begins to reveal the complex interplay between developmental stage, knowledge and intention, and external influences which impact on young mothers decision-making and, importantly illuminates how their decision-making and infant-care practices differ from that of older vulnerable mothers (Pease, 2015).

One of the challenges for professionals', is knowing whether the adolescent mother is well versed and has sound knowledge of current and safe infant-care practice, or whether they are 'claiming' they have this knowledge. Adolescent mothers may be trying to demonstrate that they can be responsible and good

mothers, or conversely, that they just do not want to be 'told' what to do and will work it out for themselves (Caraballo et al., 2016).

This section has discussed some of the key influences on decision-making and behaviour within the context of adolescence. The data highlighted that decisions were more likely reactive and unconsidered, and based on flawed or adapted information, but motivated by infant comfort and maternal convenience. The most significant themes related to this change in behaviour coincided with the ageing of the infant, a move out of the Moses basket, increasing confidence in parenting ability and a decrease in professional contact. Also related to adolescent development, and of relevance, is participant 'agency', as related to their emerging identity, developing maturity and behaviour (Bandura, 1977; Fishbein and Ajzan, 2012).

Adolescence & Agency

Fishbein and Ajzan (2012) identified that 'agency' or self-efficacy is an important element in the ability of an individual to initiate and sustain behaviour change, and influence control over their actions and environment. The young age of participants and their developing identity is likely to have had an impact on their perceived and actual agency. As evidenced in the findings chapters, there were several examples of participants being undermined by their parents in caring for their infants or struggling to control aspects of their environment due to reduced resources (need for second-hand and potentially unsafe equipment). Or, perhaps being unable to influence the behaviour of others, as in Sophia's case with the presence of other adults who continued to smoke in the household. However, Sophia was able to confront her nan's repeated and outdated attempts to offer advice, as she had knowledge of current and recommended practices; although this knowledge was superficial, she used leaflets to support her argument, and Sophia was empowered by the good relationship she had with her family nurse, who provided information in a relevant and usable way (Fishbein and Ajzan, 2012). Interestingly Sophia's motivation to stand up for issues related to sleep position and weaning appeared easier than challenging smoking within the household, and perhaps the motivation for *not* challenging smoking was related to Sophia not

wanting to quit, rather than a lack of agency. While participants demonstrated robust self-efficacy, perhaps related to the adolescent attitude of ‘it won’t happen to me’ and, ‘I know what I’m doing’, and ‘how hard can this be?’, at other times they demonstrated a vulnerability and uncertainty about their mothering role and expressed needing help.

*‘[is there anything that worries you?] sometimes I was going to say when she’s asleep, but I **don’t worry when she is actually asleep**. A lot of people have said to me like ‘oh my god she sleeps 3 like 3 or 4 hours, don’t you check her?’ and I was like ‘no I don’t check her’ and they’re like ‘oh, we’d worry’.*

*‘I think, I think I’m alright, I **think I know what I’m talking about**, I think. No, I feel fine, I **know that she’s safe when she’s asleep**, like I know, obviously before they tell you everything, so I know from them. So, I’m fine, yeah. She’s fine.’*
(Evie, 19: IV 2)

*‘My nan, because at night if I can’t get him back to sleep, or I’m getting like stressed or worried, then she just comes downstairs, **she just comes downstairs routinely like every night to make sure I’m OK**. [what if your nan wasn’t here?] I’d be lost, I wouldn’t have half a clue what I’m doing....’*
(Sophia, 16: IV 2)

This vulnerability emerged over time, once relationships had been established, and that included participants becoming familiar with me as a researcher, to begin to reveal this vulnerability. This is an important point and demonstrates that these adolescent mothers need time to develop a relationship with a professional in order to feel comfortable to express that they may need help. However, while on occasion they expressed wanting help and advice, they also, at times, dismissed or rejected it.

Associated with self-efficacy, is the belief that you can influence an outcome. Evie was the only participant to identify that ‘something might happen’, although she never explicitly mentioned SIDS. She referred to both ‘vigilance’ and ‘luck’ as predictors of outcome. Both of these themes were identified in a study by Moon et al. (2010) examining beliefs and perceptions about SIDS and safe sleep

recommendations. In Moon's study, mothers believed that SIDS was a random and unpredictable event and the best method of protecting their infant was vigilance. While Evie also expressed this, there were contradictions; vigilance suggests some element of control within the situation, however, Evie leaves her infant unsupervised and unchecked for long periods, believing that while she is sleeping, she is safe; but then attributes that if anything should happen, this would just be 'bad luck'. Her actions are not commensurate with vigilance, and 'trusting to luck' suggests a lack of control over an outcome.

'I think I'm a bit too safe. I'd rather be too safe than not [laughs]. [Why do you say that you think you are too safe?] 'Cos I've known babies that obviously they sleep with their teddies and their sleeping blankets. I just think I'm a bit of a worrier, which is no bad thing, in fact it's quite good and knowing my luck, if I did that then something would happen, and if anything happened, I'd never forgive myself.' (Evie, 19: IV 1)

'Where I did used to be so scared of her pulling the blankets over her head, but she's been sleeping in her blankets since she was first born, and she's never done it. Touch wood.' (Evie, 19: IV 3)

'Cos like, I feel like bad things normally only happen if you let them happen and you're careless. So, I would say just don't care and don't really worry.' (Evie, 19: IV 3)

This incongruence between statement and action perhaps further demonstrates the vacillation of adolescent thinking and behaviour. This behaviour I would argue is characteristic of adolescence and would not be a feature in older mothers with an established identity and a mature understanding of their role in society (Erikson, 1995; Pease, 2015). It is this inconsistent behaviour that may motivate the actions of the new grandparents, to step in and occasionally take over, or appear overbearing in their advice, for professionals to be kept at arm's length until trusted; and may perpetuate the negative social construction of the adolescent mother as irresponsible (Nayak and Kehily, 2014).

New Grandparents Influence

In previous sections, the role and influence of the new grandparent have been explored. This relationship cannot be underestimated in terms of the influence that can be exerted on the adolescent mother, and particularly when living in the same household, as was illustrated by Mia's mother taking over care. Lagon, Moon, and Colvin (2018) found that while under non-parental supervision, infants were more likely to be placed prone, or outside the crib for sleep, in car seats for example; and following on from this work, Kassa, Moon and Colvin (2018) identified that there was a need to educate non-parental caregivers on safe sleep recommendations. Although not a focus of my study, some of the interactions with participant's parents and their views, and some of the reported activity that went against the wishes of the participants, identify the potential for conflict between the new grandparent and young mother regarding infant-care practices. This situation can perpetuate unsafe infant-care practices, particularly when the new grandparents may be providing a significant proportion of infant-care, in circumstances where the young mother has returned to education for example. I did not identify any literature on parenting and peer group role modelling influences specifically, however, given the developmental stage and the need to identify with a peer group suggests that by being amongst family and friends who have babies may strongly influence behaviour and infant-care practices (Blakemore, 2018). Again this demonstrates the requirement for specialist service provision to foster a connection between new mothers who may feel excluded from more mainstream parent facilities due to their age, and their perceived judgement on them as young mothers, an issue highlighted in several studies with young mothers (Arai, 2007; Ellis-Sloan, 2014; Leese, 2014; SmithBattle, 2013).

Culture

Parenting philosophies that include achieving long periods of sleep as the gold standard, encouraging infants to self-soothe and sleep alone, and 'not spoiling the child' are all inter-generational family legacies, and culturally may be very difficult to change. Inadvertently, new grandparents are likely to perpetuate these philosophies and participant narrative was littered with reference to these

practices. Infants were described in terms of their skill level at sleep, a 'good sleeper', or she 'does not sleep at all'. Evie referred to her infant as a 'good sleeper', an expert, 'she knew what she was doing', and therefore Evie did not worry about her infant while she was asleep, believing her to be safe.

*'she has a good sleep, 'cos **she's a good sleeper**. She goes bed, bath, feed then bed, she's asleep by about ten to ten and she probably wakes up about twenty past four, ... **but still that's a good sleep**. So, I leave her on her own in her cot and I can have a bit of me time, 'cos it's very rare that I'm not with her so at night I'm on my own. So, I leave her upstairs as she's such a good sleeper'*
(Evie, 19: IV 3)

*'The longest has probably been about 5 hours, to be fair. Quite a long time, only because, like 'cos **she's been doing it for so long now, I know like, touch wood, that everything's normal...**'*
(Evie, 19: IV 3)

Sleep activity of infants was a focus for participants, and they would try to achieve good quality and prolonged sleep in a variety of ways. Pease et al. (2017a) also found that infant-care practices were related to finding 'what worked' to achieve the longest amount of sleep and that safety was a secondary consideration. Infants were also encouraged to 'learn' to fall asleep and self-soothe. Once the infant was placed into their cot, which was considered a safe environment, infants may be left for quite long periods of time unsupervised or unchecked, mothers believing that they were safe while they slept; and stating that they would 'know' if something was wrong, even though none of the participants had baby monitors. Interestingly, Pease et al. (2017a) documented that their participants regularly checked their sleeping infants, while my participants did not. This behaviour may be related to an adolescent attitude of 'it won't happen to me', an 'egocentric' view of requiring 'me time', or related to information delivery and processing in this group. The fact that Pease's participants appeared more aware of the risk, while none of my participants mentioned SIDS, may explain this phenomenon to be specifically related to adolescent mothers.

Prolonging sleep at all costs was also important, even in unsuitable environments such as car seats (Batra, Midgett and Moon, 2016a; Callahan and Sisler 1997; Kassa, Moon, and Colvin, 2016), or once the infant had fallen asleep and needed to be put down.

'If he falls asleep in the car in it [car seat], and if he's still asleep when I bring him in, then I'll just leave him there. When he wakes up, I take him out. [And is he in his outdoor clothes until then?] Yeah.' (Mia, 16: IV 2)

"Cos if you put her down on a flat surface she'll wake up. [OK.] She knows. But if you put her down where it's like raised and all comfy, she'll not wake up. Sometimes with her head, I might put a like a small pillow underneath it, but that's only if she's sort of in a light sleep because it's easier to put her down without her realising that my arms moved, but that's very rare.' (Evie, 19: IV 3)

Comfort and Convenience

The early postnatal interviews yielded data focused on how long the infant slept, and how mothers achieved this, including on occasion taking the infant into bed with them. All infants were reported to be placed into their Moses baskets for all sleep periods. The Moses basket provides an appropriate and portable space for an infant; however, once the infant had outgrown the Moses basket, issues were identified with both day and night-time sleep environments. Infants were reported to have outgrown the Moses baskets shortly after the fourth postnatal week, which was much earlier than I had considered, and may be an issue that professionals have not thought about in relation to safe sleep assessment. Mothers were then more likely to select or create an unsafe environment for their infant, particularly for daytime sleeps, such as on a sofa, pillows on the floor, soft bean bag or used a car seat or baby chair. There are several issues here: the infant is no longer in a safe 'portable' space, therefore, alternatives for keeping the infant close during the day are mitigated by creating a space in which to leave the infant for periods of time while the mother gets on with daily activities, however, this is

often in a different room from the infant. From my observations and descriptions from the data, these created spaces resembled a 'nest', which by design were soft, or the infant was propped or 'boxed in' on a sofa by cushions and pillows.

'Loads of blankets underneath her and then just a thin blanket over the top ... so just loads underneath her, 'cos if you put her down on a flat surface she'll wake up. She knows. But if you put her down where it's like raised and all comfy she'll not wake up.'
(Evie, 19: I/V 3)

These makeshift 'beds' were also described in studies by Ajao et al. (2011), Batra et al. (2016) and Shapiro-Mendoza et al. (2015) and a recent finding by a child death review team in the USA, reported soft bedding as an important risk factor, particularly in the four to twelve-month age group (Matthews et al., 2016a). The theme of '*comfort as softness*' emerged from the participant narrative and several studies have identified similar aspects in infant-care practices driven by both the perceived comfort of the infant, and convenience for the mother (Herman, Adkins and Moon, 2015; Shapiro-Mendoza et al., 2015; Whiteside-Mansell et al., 2017). Shapiro-Mendoza et al. (2015) identified that there was a socio-economic gradient with soft or loose bedding use, with 77% of adolescent mothers stating use, and one of the strongest predictive factors associated with the use of soft and loose bedding, was maternal age below 20 years. Caregiver preference and perceived infant comfort were the most frequently cited reasons for the use of soft bedding. A particularly interesting finding from Shapiro-Mendoza's study was the decreased use of soft covers *over* the infant, but an increase of use *under* the infant, a finding illustrated by the quotation from Evie above. This may also influence decisions around the perception that 'firm' mattresses are too hard or uncomfortable for the infant; something that motivated Sophia to place a soft adult pillow into the cot. Although in this case, Sophia's second-hand cot did not come with a mattress, therefore for her, the obvious solution was a pillow. My data identified some confusion between tucking infants' blankets in to reduce the risk of pulling bedding over their head (with the perception of overheating

rather than suffocation or strangulation), and leaving bedding loose in case the infant became hot; participants were not linking the risk of loose bedding as becoming a suffocation or strangulation risk. Although Evie did allude to the risk of suffocation, she mainly related loose bedding to the issue of overheating. This was a common confusion identified with all of the participants. A study by Matthews et al. (2016a and b), found that while mothers generally believed SIDS to be an 'act of God', over which they had no control, if education messages were provided in terms of preventing suffocation and strangulation risk, then mothers were more receptive to complying with the recommendations regarding soft and loose bedding. Mothers who received text messages reinforcing these recommendations were found to demonstrate a 26% decrease in the use of soft surface and soft bedding for a reference sleep and a 30% decrease in use over the past week. Matthew's research resonates with my data; participants were confused by the safe sleep recommendations, demonstrated that they were unaware of the rationale that underpinned the recommendations and none of them mentioned SIDS. However, they were able to translate simple and clear instructions into practice, 'back to sleep' and 'feet to foot' for example. By keeping messages simple, and explanations relevant, young mothers may be more likely to make decisions based on the best and safest available information, and transfer this knowledge into all sleep environments.

As highlighted in this section, there are a number of important changes in respect of the infant sleep environment that were identified between the fourth and sixteenth postnatal week and as such may represent the most important and interesting findings of this research, and are discussed in the next section.

Fractured Application Summary

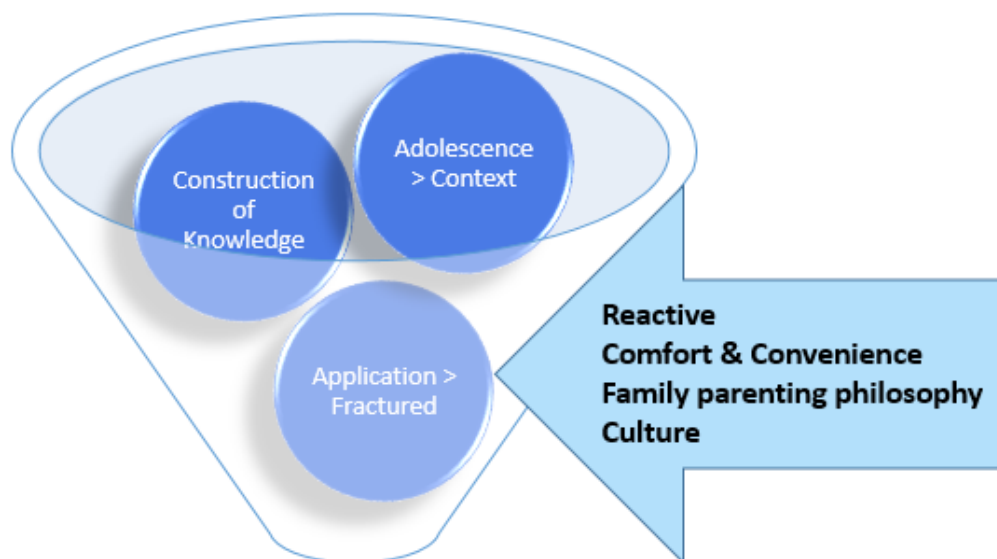
The findings revealed a 'disconnect' between stated knowledge, understanding and application; and this behaviour seemed to go unnoticed by participants. Application of knowledge was flawed and inconsistent; there was a lack of awareness of rationale for recommended practices and stated knowledge and intention was not a predictor of behaviour. Decision-making was influenced by comfort, convenience and what worked, rather than applying any risk assessment

using safe sleep recommendations, nor did participants make any explicit reference to SIDS in relation to recommended infant-care practices.

There was evidence that participants were overwhelmed by information which impacted their ability to understand and translate knowledge into safe infant-care practice. This is likely impacted by not being provided, or not recalling the rationale for the recommended practices from the outset, an example of this was the confusion of application of safe sleep recommendations related to loose bedding and overheating.

Changes in infant-care practices which increased the risk for the infant in the sleep environment were revealed as the infant aged, maternal confidence in their parenting skills increased, and knowing their infant. This coincided with a decrease in contact with healthcare professionals and a resultant loss of opportunity to identify potential and unintended unsafe infant-care practice, and there was no further sleep assessment by a professional after the initial contact.

Figure 10. 3: The influencing factors in translating knowledge into practice related to infant-care practices



The three diagrams above 10.1, 2 and 3, summarising the emergent themes within the superordinate themes, illustrates how these themes relate to, and potentially influence each other; this diagram is further developed in section 10.6. These themes are all related to the adolescent mother, themes which participants have

highlighted as important, and which reveal their particular experience of becoming a mother. The next section provides a summarised list of key findings, and the following two sections, *the four to sixteen-week window* and *sociological vulnerability*, highlight the importance of these findings in the context of recognising where increased vulnerabilities lie for this group of parents and their infants.

10.4 Summary of Key Findings

- Adolescents are ‘becoming adults’, but it should not be assumed that they have attained adult functioning when they become mothers
- Information processing influenced by:
 - Characteristics of Adolescence
 - Adolescent brain functioning
 - Information delivery – method, medium, timing, relevance
 - Quality and completeness of information delivered
 - Quality of relationship with professionals
 - Access to relevant services
- Application of knowledge influenced by:
 - Quality of information
 - Understanding the rationale for risk reduction and safe sleep recommendations
 - Processing of information into usable knowledge
 - Ability to apply ‘principles’ of risk reduction and safe sleep recommendations in all infant sleep environments
 - Family parenting philosophies
 - Cultural influences
 - Quality of relationship with professionals
 - Access to relevant services

These points have all been explored within the findings chapters and have been critically discussed in this chapter. It seems appropriate to consider the findings of this research as based on sociological factors, and in exploring these themes

summarised above, reveals that this is where the increased vulnerability, for both young mothers and their infants, may lie.

10.5 The four to sixteen-week Window

From the inception of this research project, I was curious about whether infant-care practices would change during the early postnatal period and what the impact of this might be. A number of themes emerged between the first and second postnatal interview points, highlighting that significant changes did occur with infant-care practices which increased risk for the infant in the sleep environment. Similarly, studies by Batra et al. (2016b), Hauck et al. (2008) Lesko et al. (1998) and Matthews et al. (2016) all identified changes to infant-care practices during this time period that increased risk to the infant in the sleep environment.

The factors that contribute to this set of circumstances are no doubt complex, but the themes in this study appear to be associated with the mothers increasing confidence, and the increasing age and development of the infant; with their motivation based in comfort, convenience and what works, and may be confounded by adolescent brain functioning and withdrawal of professional input. By the fourth postnatal week, professionals had generally withdrawn from home visiting, and although contact was invited, via baby clinic attendance, this transferred responsibility for help seeking to the young mother. For Sophia and Mia they had ongoing home visits from their family nurse; however, these fortnightly visits were to deliver a specific parenting programme, and as such may have overlooked some basic parenting requirements for advice. For adolescents, seeking out health professionals may seem like a lot of effort, particularly for the younger participants who described the 'simple task of going out' like an 'expedition'. Participants were more likely to seek advice from family and friends, use the internet or 'have a go' at resolving problems themselves (Caraballo et al., 2016). Each of these options increases the likelihood and perpetuation of unsafe and outdated practices, or practices based 'loosely' on the original rationale. As participants gained confidence in their parenting ability, and as the infants aged and developed personalities, participants attributed characteristics and

preferences to their infants and occasionally used these preferences as a basis for some of their decisions, rather than risk-assessing options logically.

*“Cos if you put her down on a flat surface she’ll wake up. [OK.] **She knows.**”*
(Evie, 19: IV 3)

‘So, I put him on the bean bag because he prefers that.’
(Sophia, 16: IV 2)

They also believed they knew their infant better than anyone else, were able to make the best decisions for them and leaflets were aimed at a particular ‘type’ of baby, not theirs. Interestingly, Caraballo (2016) identified that adolescent mothers in her study were more likely to state reliance on ‘instinct’ or they ‘just knew’ what to do, rather than asking for advice, mirroring my findings.

As the infant aged, they were moved out of the Moses basket, which then posed the problem of where to put the infant when not in their cot. Acting mainly out of convenience, but driven by ‘comfort’, participants created ‘nests’ as described earlier, ‘barricaded’ the infant in place on the sofa or used a bean bag or car seat (or a vibrating baby bouncer that looked similar to a car seat). Evie had a travel cot but stated this was too large for the lounge and too ‘faffy’ to put up. So, all of these infants were placed into soft and loose bedding scenarios or ‘car seat type’ equipment when they were out of their ‘night-time’ cot, both for day-time sleeps, and to be closer to their mother who might be occupied in a separate room. Although participants reported that they still placed the infant on their back for sleep, there were several examples in the data when infants were found to have ‘rolled over’ and were prone or on their side. The mother generally explained this as the infant being ‘developmentally advanced for their age’. Rechtman et al. (2014) identified that infants who were sofa sharing or sharing a sleep space, for example, an adult sitting on the sofa while the infant was sleeping, were more likely to be placed prone or on their side. Evie was the only participant who reported that she selected a prone position for her infant when she was sitting on the sofa with her infant lying on her chest. Although not observed or reported in

my data, there is a risk that an unfamiliar sleep position may be selected in the belief that the mother is close by and vigilant (Moon et al., 2010; Rechtman et al., 2014). However, there was no evidence of any 'risk assessment' by participants in their choice of makeshift environment they created for their infant; participants were not taking account of an unfamiliar position or risk of suffocation and strangulation posed by these scenarios. This perhaps relates to not being given the clear rationale for the safe sleep recommendations from the outset, or perhaps convenience and comfort are too powerful a motivator, or perhaps their belief in vigilance offered sufficient protection. All participants believed that because it was daytime, and the infant was close to them, they would hear if there was a problem, and believed their infants to be safe in these circumstances, a finding shared in Rechtman's study (2014). For some of the daytime sleeps, infants were placed into their cot in their mother's bedroom; however, the infants were then left to self-soothe, and fall asleep and were then not checked for quite long periods of time. At interview points, all cot spaces were observed to be clear of paraphernalia; however, blankets were generally untucked, and none of the participants had baby monitoring devices, believing they would hear the infant. For night-time sleep, all infants were reportedly placed into their full-size cot, but the issue here was of loose blankets and a soft surface; all participants reported that they only placed the blankets over their infant's tummies to allow them to kick them off should they become hot. Again, mothers often left the infants to sleep alone, unchecked until they went to bed, citing the need for 'me time'. However, all of my participants shared their room with their infant, but this was identified as the 'norm' and convenient; although Ruby stated that placing infant's in their own room 'was not allowed', she could not identify why this was the case. While there were a couple of reported instances where participants had brought the infant into their bed, this only seemed to be an ongoing issue for Mia; although Mia stated that she was aware of the risk, she did not have a strategy in place to counter this behaviour, as Sophia and Evie did. A study by Paul et al. (2017) found that when infants shared their parent's room, this increased the likelihood of bedsharing; but, found this in the four-month-plus age group. While a study by Batra et al. (2016b), using video to capture infant sleep episodes, found that

despite parental awareness of risk factors and being videoed, a variety of sleep locations were used for the infants during the night, with each subsequent 'move' exposing the infant to a more risky environment than the previous. Batra (2016b) also identified the presence of loose items in the cot and by six months of age, reported that a higher percentage of infants had been moved to their own room. In Sophia's case, when confronted with an unsettled infant and a perceived 'hard' mattress, she decided to place her soft feather pillow into the cot. This 'problem-solving' activity is driven by what she thought would work and encourage the infant to sleep. This demonstrates, that while Sophia was able to make use of some of the information she had been provided, in confronting her nan about weaning and sleep position, she reverted to the reactive 'what works' option in this situation. Also, the cot was three-sided, and was not secured to her bed, further increasing the risk for the infant. Sophia had not consulted anyone about this cot set up, nor were there any further checks of the infant sleep environment carried out by a professional after the initial safe sleep assessment, which was completed while the infant was in the Moses basket. While I would argue that this is a key function of any professional contact with mother and baby, Sophia was demonstrating fragmented recall of information; the safe sleep information has been subsumed by the need to comfort the infant and find a resolution that worked. Sophia stated that the infant was much more 'comfy and settled' on this soft pillow, she believed that she was doing the best for her infant at that point and therefore the problem was solved; she made no 'risk assessment' of the situation related to safe sleep recommendations. Sophia could identify that infants should be placed on their back for sleep and not to overheat them, she had a room thermometer and stated she left blankets loose. Sophia demonstrated both a lack of awareness of other key safe sleep recommendations and confusion between the messages of do not overheat and no loose bedding. Although this example is specific to Sophia, other examples have been presented in the findings chapters that demonstrate participants were overwhelmed by information, were selective in what they recalled, and their knowledge often lacked understanding of the rationale for recommended practice. They were more likely to recall simple, clear and repeated messages, but became confused when having to apply

information dynamically. When young mothers do not understand the rationale for recommended practices, this is likely to contribute to those recommended practices being adapted or discarded in favour of what works, a finding identified by both Caraballo et al. (2016) and Pease et al., (2017a). Hauck (2008) relates changes in infant-care practices to the belief that SIDS occurs in young infants and therefore the risk is perceived to decrease with increasing infant age, impacting on parental behaviour. In my study, as none of the participants explicitly mentioned SIDS, it was difficult to assess whether this was the case for them; however, my interpretation was that these behaviours could be linked to adolescent brain functioning and were a product of their reactive decision-making processes rather than consideration of risk, based on a working knowledge of risk factors. Participants could recite some of the safe sleep recommendations but were not applying them in all circumstances; their ability appeared limited to a 'cot-centric' approach, but even then, application of recommendations were confused. Once the infant was out of the cot, then makeshift environments were fabricated which increased the risk for their infants. This 'stating safe sleep knowledge' and 'doing something different' was observed during several interviews and I would suggest, supports the argument that the reactive decision-making processes of the young mother are a feature of adolescent brain development and functioning which may not be evident in studies with older mothers.

Service Provision Considerations

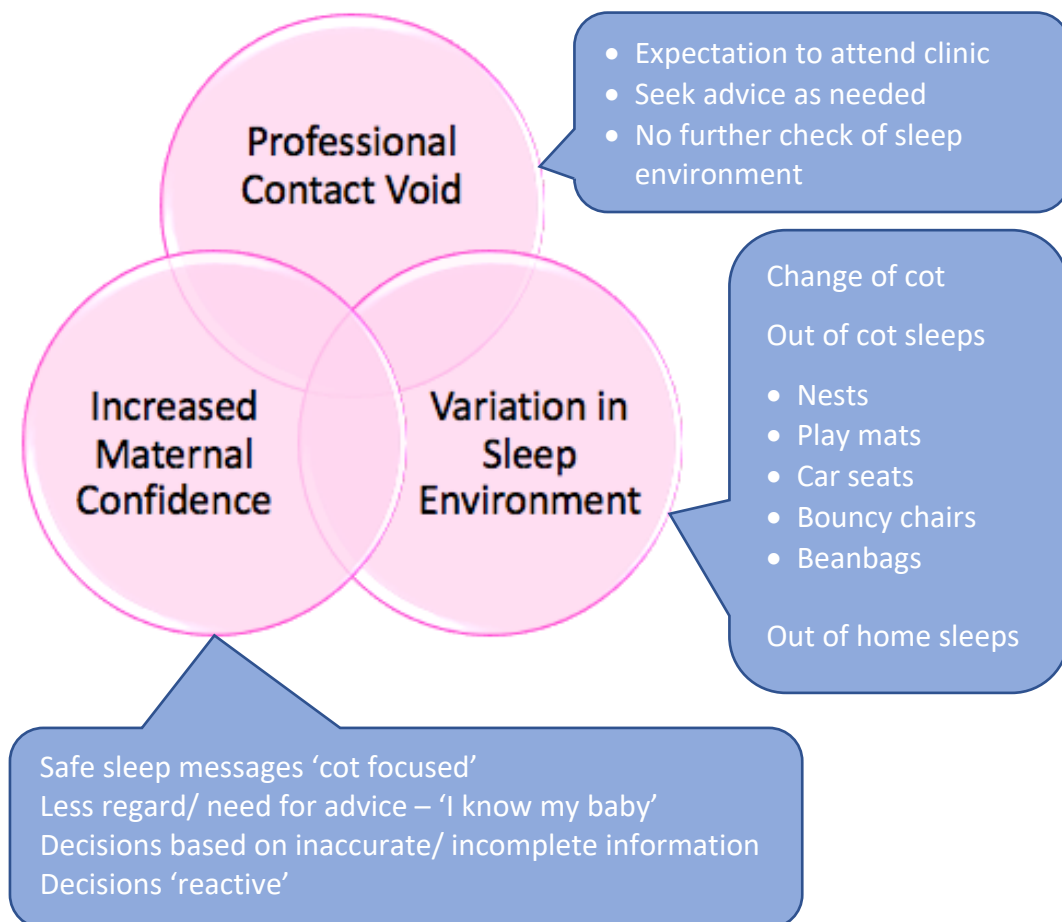
Discussion or confirmation of practice around safe sleep was only reported during the first postnatal interviews, with reported variability in the quality and content of safe sleep advice and assessment; and when all the infants were reportedly placed into their Moses baskets for all sleep periods. Between the second and third interviews, participants had started to move their infants out of the Moses basket into a variety of environments for sleep and daytime care. By the third interview, one infant was regularly being placed into an unsafe, three-sided cot with an adult soft pillow as a mattress, while the other was frequently propped up with soft pillows on the sofa or placed onto the floor in a 'soft nest', for day-time

sleep. Of these two situations, one participant reported seeing her family nurse fortnightly, while the other had not seen a health professional since the health visitor's first home visit at around the second postnatal week. Colvin et al. (2017b) in a study of sleep environment risks, identified that different risks were presented between the sleep environments of younger and older infants and that parents should be given clear pre-emptive developmental information in order to keep pace with their infant's changing sleep environments. While Whiteside-Mansell et al. (2017) suggest that direct observation of the sleep environment is the most reliable method of assessing risk and initiating the conversation about risk reduction, they also acknowledge the resource implications of direct observation. Their study gathered data to validate a safe sleep assessment tool which could be used remotely; their data identified high compliance between maternal self-report and researcher observation. While this should support safer infant-care practices, from my data, the disconnect between what mothers said they did and what they actually did, would call the reliability of using such a tool remotely to assess the sleep environment, into question. I would argue, for my participants, the data supports the requirement for direct observation and a conversation to ascertain current infant-care practices and the rationale mothers give for these practices, and the opportunity to amend unsafe infant-care practices.

The findings discussed in this chapter offer three superordinate themes, *transition*, *the construction of knowledge*, and *fractured application*, which influence maternal decision-making and behaviour related to infant-care practice (Figures 10.1 – 3). Within the theme of fractured application, a further three key '*areas of influence*' were identified from the data, which contribute to increasing risk for the infant specifically during the '4 to 16-week window' which is the period of highest risk for SIDS to occur. These '*areas of influence*' are represented in the diagram below (Figure 10.4). These are 1. The increased confidence of the parent in infant-care decision-making, but decisions are not necessarily based on accurate information; 2. Variation in the sleep environment as the child grows and develops, including the potential for 'experimental, convenient and unplanned' sleep environments and the inability to risk assess the environment in terms of

safe sleep recommendations; and 3. The 'professional contact void'. Home visits have ceased unless a specific health or social need has been identified, and the expectation is that the parent will access child health services and seek advice as required; and repeated sleep assessment does not appear to be on the professional's agenda, even when continued contact and home visiting occurs.

Figure 10.4: Venn diagram highlighting the interaction of risk factors in the '4 to 16-week window'



These findings reveal that infant-care practices between the fourth and sixteenth postnatal weeks subjected the infant to increased risk due to reactive parenting and failure to apply safe sleep recommendations and risk reduction measures as the infant aged. These sociological factors are associated with the adolescent mother but are directly related to the developmental progression of the infant. Therefore, it seems sensible to consider these as '*sociological risks*' in relation to

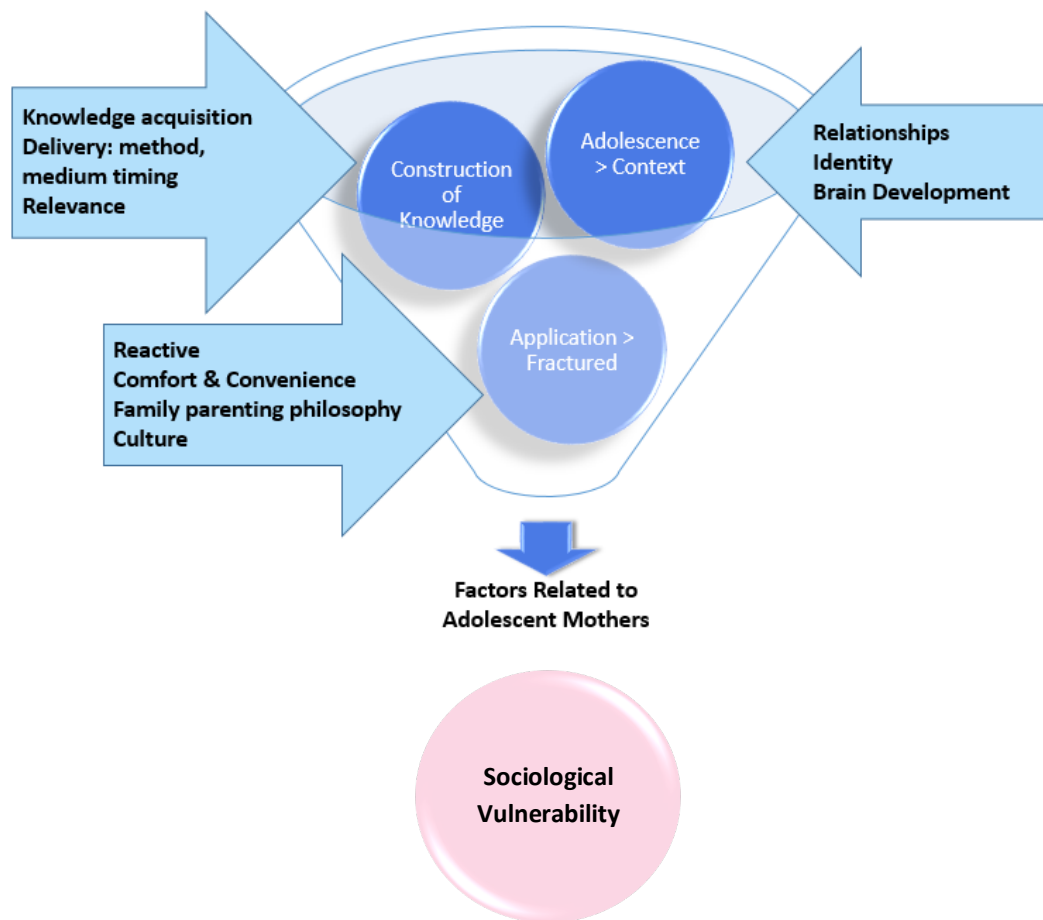
the physiological triple-risk model (Filiano and Kinney, 1994), thereby contributing to a more holistic understanding of the risks for infants within this domain.

This diagrammatical representation of findings illustrates how these risk factors interact, and could offer a framework, based on the emergent themes identified within each of the sub and superordinate themes, which could be considered as headings to develop or enhance existing risk assessment tools to capture these important elements.

10.6 Sociological vulnerability

This research aimed to enquire about the lived experience of the vulnerable young mother from her unique perspective and to identify what influenced her decision-making and infant-care practices related to the infant sleep environment. Adolescence was identified as the specific context in which the participants were becoming mothers and becoming mothers did not accelerate them through this developmental stage, to becoming adults. The key message from this thesis is that adolescent mothers may be different from other vulnerable mothers due to their evolving brain functioning, and the particular influences they experience within the home and family environment; and as such, require a different approach to engage them in health education strategies to reduce risks to their infants. Each of the themes is related to the adolescent mother, which directly impacts the infant; these maternal factors can be considered as imposing a '*sociological vulnerability*', therefore, when risk factors are identified in either of the 'theme' categories, this can be considered as increasing '*sociological risk*' (Figure 10.5). In this regard, these themes can be used to assess and identify potential risks which might then be modified.

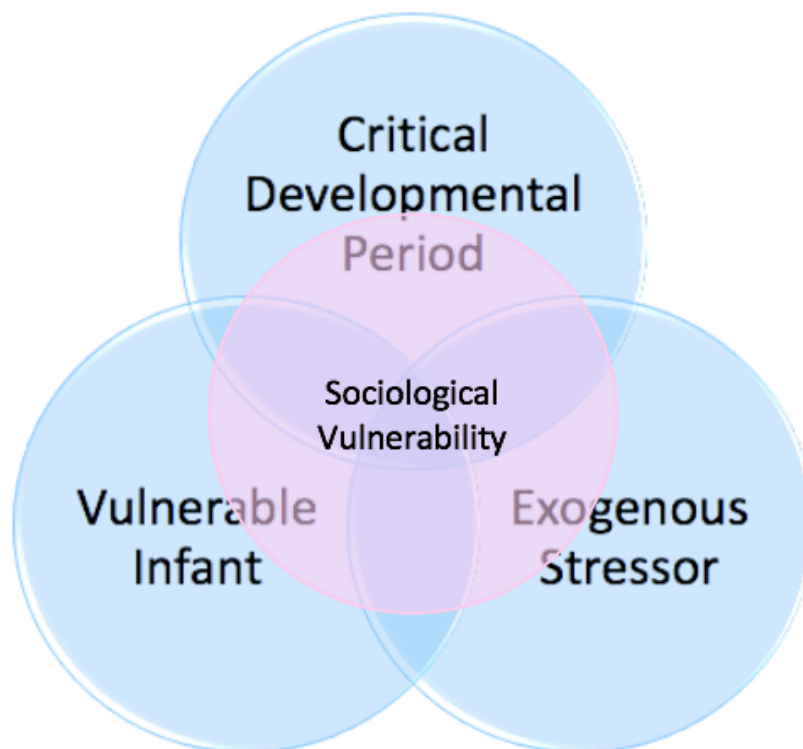
Figure 10.5: Illustration of Themes relating to Sociological Vulnerability



Filiano and Kinney's (1994) triple-risk hypothesis was introduced in chapter one and primarily considers the physiological environment and associated risk factors of the infant, identifying that where these factors intersect, represents an increased likelihood of SIDS occurring. We know that not all infants in these circumstances die as SIDS, and differences in infant-care practices may, in part, explain why some infants die while others survive. This thesis has identified that infant-care practices employed by the adolescent mothers in this study increased the risk for their infants in the sleep environment. Infants that do die, and who are labelled as SIDS, are often identified with associated and modifiable risk factors, which might be ameliorated by behaviour change. This thesis also identifies this to be the case: all of the themes identified from these data are modifiable; and in the case of adolescence, the specific impact of this developmental stage should be taken into consideration during risk assessment and the delivery of educational interventions; ergo, the professionals' approach with adolescent mothers can be

modified. While acknowledging that compromised physiological vulnerability increases the risk for SIDS at the point of intersection the domains of critical developmental period, exogenous stressor and vulnerable infant, by including consideration of the maternal factors presented in this thesis, expands the horizon of risk to be assessed and potentially ameliorated. The triple-risk hypothesis has therefore been enhanced to explain the emergent theories generated from this inductive research, adding a '**sociological vulnerability**' domain, encompassing these maternal factors (Figure 10.5). Service providers, policy makers and professionals working with adolescent mothers should consider the findings from this thesis; by understanding more about the lived experience of adolescent mothers, what influences their decision-making processes and their ability to translate information into practice, may provide evidence to support a different approach to service provision, enhance current risk assessment tools, support the design of relevant health education strategies and positively enhance engagement with this specific client group.

Figure 10.6: Sociological Vulnerability Model of Identifying Increased Risk for SIDS (adapted from Filiano & Kinney, 1994).



10.7 Chapter Summary

This chapter has critically discussed the main themes from the findings chapters in relation to the research questions and within the context of the extant literature and current health service provision. The key discussion points have been summarised and Filiano and Kinney's (1996) triple-risk hypothesis has been enhanced to explain the emergent theories generated from this inductive research. By incorporating the new domain of '***social vulnerability***' ensures that the sociological factors for the adolescent mother which impact on the safety of their infant in the sleep environment offers a more robust assessment of those risks which can be potentially eliminated. The themes generated for the adolescent mothers within this thesis can provide a basis for enhancing current risk assessment tools. The next chapter offers conclusions and considers the impact of this research, and implications for practice and future research.

CHAPTER 11. CONCLUSION

11.0 Introduction

This final chapter draws together the key elements of the thesis and highlights the unique contribution this research makes to the current literature. The implications for practice and future research are considered, and the chapter concludes with details of the dissemination strategy and final reflections.

11.1 Key Points of the Thesis

Chapter one identified that sudden infant death syndrome is the leading cause of death in infants between the ages of one month to one year in developed countries, and in England and Wales, around 200 infants die suddenly and unexpectedly each year and are labelled as SIDS. Unexplained infant deaths are now more likely to be reported with modifiable risk factors, such as unsafe sleep position or hazardous sleep environment, maternal smoking, alcohol and/or drug use; and the majority of these deaths now occur in a population identified with increased vulnerability, for example, young, single mothers with low educational achievement and low income. Recent research has identified that mothers at increased risk of experiencing SIDS have less knowledge of risk reduction strategies than mothers considered to be low-risk. In order to further reduce SIDS rates, educational approaches need to be modified, which means that a deeper understanding of what motivates and supports behaviour change in this vulnerable and high-risk group of parents is required. Chapter two reviewed the social construct of the young mother, identifying both positive and negative aspects of young motherhood; and considered several decision-making models that may be employed by young mothers, and factors that may influence their behaviour and decision-making, such as family legacies, and social and cultural norms. The chapter concluded by reviewing the characteristics of successful educational interventions and relevant behaviour change theories and frameworks. The research questions were formulated, having identified that the voice and perspective of the vulnerable young mother were absent in the literature. As such, exploring the perspective of the young mother, and

understanding what life is like for her, may be valuable in identifying how and why young mothers make the decisions they do, and what influences this; which, in turn, may provide a new perspective on what motivates and supports behaviour change in this vulnerable group.

This thesis aimed to illuminate what was important for participants in terms of their perception of, and the relevance to them, of the current risk-reduction messages to inform the debate on why parents fail to take up safe sleep practices and reduce risks to their infants in the sleep environment.

Chapter three presented the philosophical and methodological basis for this research and chapter four reported the research methods. Chapter five provided a detailed account of the analysis phase, with worked examples to illustrate the process as aligned to the tenets of IPA. The quality and validity of the research were evaluated using Yardley's (2008) four principles framework, highlighting aspects to consider during the research process based on sensitivity to context, commitment to rigour, transparency and coherence, and impact and importance. The dual role of professional as a researcher was also critically evaluated. The chapter concluded by introducing the participants with 'pen portraits' to facilitate transparency and provide some context for the subsequent findings chapters.

Chapters six to eight presented the superordinate themes of ***transition***, ***the construction of knowledge***, and ***fractured application***, as an interpretive account of the findings grounded in the participant narrative.

Transition revealed emergent themes related to the important developmental stage of adolescence and superimposed on this, was their unexpected journey to motherhood. Themes highlighted that this transition to both adulthood and motherhood was a period of significant change, impacting their relationships and status within the family; however, becoming a mother did not accelerate participants into adulthood. This theme identified that the context for participants, therefore, was adolescence, and remained so after the birth of their baby. This is an important finding and may impact how professionals engage with, and communicate health education information to, this population.

The construction of knowledge emerged as a theme which dominated participants' experiences of becoming a mother, influencing their knowledge,

behaviour and decision-making, both positively and negatively. Participants wanted information about their pregnancy and were motivated to seek information; while participants could identify some of the harms of smoking and benefits of breastfeeding, knowledge did not always influence their behaviour. In contrast, information and advice on parenting, including safe sleep, appeared irrelevant and unnecessary to participants. Only two to four of the current safe sleep recommendations could be cited by participants, which did not improve over the four-month interview period; in fact, two of the recommendations became confused over time for all participants, further increasing the risk to their infants. Participants were unable to cite the rationale for recommended practices, and none of the participants explicitly related the safe sleep recommendations to SUDI or SIDS. Postnatally, participants were overwhelmed by information, expressed that infant-care was common sense and instinctive, and therefore often rejected, or viewed information as irrelevant. Participants' knowledge of risk reduction and safe sleep recommendations was fragmented, incomplete, and often they demonstrated that they lacked an understanding of the rationale; therefore, application of the recommendations was open to misinterpretation and adaptation. However, there were instances where information was accepted and used to counter well-meaning but outdated advice, which illustrated the importance of the quality and delivery of information from professionals; however, application of information was inconsistent. This theme also highlighted the challenges in identifying an effective strategy to communicate health education messages effectively, specifically to adolescent mothers.

The theme of ***fractured application*** offers a unique insight into the functioning of the young mother in relation to the research questions; how they gather, retain and recall information, and how they then apply knowledge and make decisions about infant-care practices. This theme demonstrated that knowledge was not always applied effectively or consistently, and that information may be manipulated or adapted to suit the circumstances and that knowledge and 'intention' were not necessarily a predictor of behaviour. Specifically, adolescent brain development might impact information processing and decision-making functionality, resulting in vacillation between the impulsive and reactive

functioning of the adolescent, and the more logical, considered adult reasoning. Adolescence was also observed to be 'extended', with participants' demonstrating a reluctance to move to independence but wanting validation as a mother; while their parents appeared to encourage continued dependence in their daughters or undermined the young mother's role. The most interesting finding was the apparent 'disconnect' between what participants said they were doing (or intended), and what they actually did. This disconnect was a feature of both their narrative and my observations, and participants seemed unaware of this discrepancy. This novel finding perhaps illuminates the 'issue' with young mothers, as having some awareness of safe sleep recommendations, but not fully understanding the rationale or how to apply them in all circumstances; the resultant **fractured application** inadvertently increased the risk for their infants in some circumstances. Two key findings from this theme were the increased risk in infant-care practices evidenced between the fourth and sixteenth postnatal weeks, and the nature of increased vulnerability related to the sociological aspects of their mother's developmental stage.

The discussion section was divided into two chapters. Chapter nine critically reviewed the background and justification for this research and evaluated the suitability of the methodology; identifying some challenges with a longitudinal approach, a lack of clear criteria for interpretation, and the distillation of themes from exclusively within the participant narrative. However, IPA achieved a richness and depth of data, and specifically, the longitudinal approach revealed novel findings that answer the research questions. The quality and validity of the research were evaluated using Yardley's (2008) four principles framework discussed in chapter five. Two specific audit checks were conducted during the analysis phase, a detailed description of the analysis process was provided in chapter five, and the availability of the hard copy documents fulfils the research governance requirements for this project. Chapter ten critically discussed the research findings within the context of the extant literature and current health service provision. Findings were presented in relation to answering each of the research questions: that the context for these young women is adolescence and remains so as they become mothers; that this important developmental stage

influences their information processing, knowledge acquisition, behaviour and decision-making processes, and that provision of information and health education strategies, therefore, need to take account of how adolescent mothers function. Also, by understanding and acknowledging the impact of external influences, such as their parents and reduced access to appropriate services, can perpetuate exposure to outdated and unsafe infant-care practices. The findings in this thesis also reveal that infant-care practices between the fourth and sixteenth postnatal weeks subjected the infant to increased risk due to reactive parenting and failure to apply safe sleep recommendations and risk reduction measures as the infant aged. These sociological factors are associated with the adolescent mother but are directly related to the developmental progression of the infant. Therefore, it seems sensible to consider these sociological risks in relation to the physiological triple-risk model, contributing to a more holistic understanding of the physiological and *sociological risks* for infants in this domain. Chapter ten concluded by offering an enhanced version of the triple-risk model that incorporates the unique findings from this research.

11.2 Research Contribution

What emerges from this thesis, is the unique contribution to the literature of the voice of the young mother, and what life is like for her; making the perspective of the vulnerable young mother accessible to professionals, policy makers and researchers working with this group of parents. This thesis has identified that some of their decision-making and infant-care practices can inadvertently increase the risk for their infant in the sleep environment. These themes, when considered together, are 'sociological issues' related to the developmental stage and functioning of the adolescent mother but have a direct impact on the safety of her infant in the sleep environment. As highlighted in chapter one, using a model to organise risk factors into domains can be useful in assessing and identifying risks for individual infants and families. Filiano and Kinney's (1994) triple-risk model has endured as a relevant framework, evolving with research developments, and acknowledges that SIDS deaths are multi-factorial. Although this model may facilitate our understanding of why one infant may die, it does not explain why

another infant in similar circumstances, survives. This in part, may be explained by investigating differences in infant-care practices that may occur between families with similar characteristics, which has been explored in this work.

The findings from this research, therefore, can be considered alongside the physiological aspects of the triple-risk model. By adding the new domain of 'sociological vulnerability', to include the sociological and developmental aspects relevant to the adolescent mother, can provide a framework for professionals, researchers and policy makers to consider during risk assessment. It is important to identify the risks that can be modified; then by eliminating as many modifiable factors as possible, parents can reduce the risk of unnecessary infant deaths. All of the themes identified in this thesis are potentially modifiable, and in the case of adolescence, the specific impact of this developmental stage should be taken into consideration during risk assessment and the delivery of educational interventions; ergo, the professionals' approach with adolescent mothers can be modified.

This qualitative thesis, although derived from a small homogenous group of participants, offers rich data from the perspective of the young mother, with the additional benefit of a longitudinal approach. The resultant technical account provides professionals and researchers with a unique insight into the life of the young mother, which may facilitate improvement to current risk assessment tools and designing health education strategies of the future that are relevant and appropriate to engage this vulnerable group.

11.3 Research Impact

These data offer a unique insight into the lived experience of vulnerable young mothers from their perspective, and as such, this thesis makes a unique contribution to the literature. This thesis has provided a deeper understanding of what motivates young mothers behaviour; therefore, this improved insight can provide the evidence-base to modify educational approaches to be more relevant and appropriate for this vulnerable group of parents. This thesis, therefore, informs the debate on why parents fail to take up safe sleep practices and reduce risks to their infants in the sleep environment, and the longitudinal aspect of this

study revealed novel findings which may not have been revealed at a single time point interview.

- Specific and different risks were identified with this group compared to older, vulnerable mothers in previous studies presented in the literature. Risks were aligned to decision-making capability and other age-related influences that may be specifically associated with the developmental stage of adolescence. This thesis identified that while participants experienced similar issues, their ability to process information and make decisions was evolving within that developmental context, and as such, educational strategies need to take account of these differences. This thesis concludes that adolescent mothers are a specific vulnerable group within the young mother category per se and may have different needs regarding health education and health service provision.
- Participants did not relate risk reduction and safe sleep recommendations with SUDI & SIDS. This suggests that information exchange may be the issue; how professionals deliver, and how adolescents receive, and process information, and how this is translated into practice, is an important consideration for future health education strategies to reduce risks for SUDI and SIDS with this adolescent population.
- The findings related to the 'move out of the Moses basket' and the 'four to sixteen-week window' revealed a significant move towards increased risk in infant-care practice, particularly in the infant sleep environment. As the infant's aged, mothers gained confidence with parenting skills and professionals withdrew, there was no further checking of the sleep environment or discussions of how to adapt the sleep environment safely to the changing needs of the growing infant. This is a critical time period, particularly for families identified as being vulnerable to the risk for SIDS. As such, evidence from this study may highlight the need to review the current strategies and timing for delivering risk-reduction messages, to assess whether these messages are perceived as relevant when they are delivered and whether health education should continue to be delivered to vulnerable families during the period of increased risk for SIDS.

- The themes generated from these data offer an opportunity to enhance existing risk assessment tools, to support enhanced identification of 'sociological vulnerability' within vulnerable families and enable amelioration of modifiable risks to reduce further the risk of SIDS.

11.4 Implications for practice

This thesis aimed to document the context of the lived experience of the first time, vulnerable young mother, and identify what influenced their decision-making and infant-care practices that increased the risk for their infant. Key themes have been identified and explored. Each of the points made above are relevant to practice; while any transfer of findings from this small homogeneous participant group must be treated with caution, particular elements support the critical reader to apply these research findings, judging whether they are appropriate to their particular context. Elements such as the thick description of the context, researcher interpretation that remains close to the participant narrative, declaration of researcher positionality, and the application of a quality framework, all support the critical appraisal of this work.

Professionals must be aware of the complex interaction of circumstances that conspire to increase the risk for the infant of the adolescent mother and could use the enhanced triple-risk model, proposed in this thesis, to identify specific risks when working with this group of parents. There is the opportunity to develop a risk assessment tool, based on the themes identified by this research, to support practitioners to identify modifiable risks when working with adolescent mothers. The findings from this research also support a reconsideration of universal service delivery to this group of parents; suggesting that their needs differ from older vulnerable mothers, and as such require specialist provision to meet their specific needs, particularly during the first six postnatal months.

This thesis can, therefore, support professionals, researchers and policy makers to understand this unique perspective, and it is for them to consider how they might best use this information to support and improve practice, service delivery or policy design and research in the future.

11.5 Implications for future research

During this research, other areas have been identified as influential in understanding the complex relationship between how young mothers gather, process and apply information and the key influencers on this activity. My research has highlighted some important areas for further research, including:

- Further qualitative research with young mothers between the fourth and sixteenth postnatal week could build on the findings of this research. Using a larger sample to understand further their behaviour and changes to infant-care practice that can increase the risk for infants related to SUDI and SIDS. This research could also assess whether safe sleep recommendations are perceived as relevant when they are delivered and identify when health education should be delivered, and which methods are the most impactful with this group of parents.
- Qualitative research to understand the experiences of mothers becoming grandmothers. Grandmothers are key influencers of young mothers in their infant-care decision-making, and this complex relationship would benefit from qualitative exploration. The findings from this research identified the significant influence grandparents have, revealed how instrumental they were in directing the infant-care practices of their daughters, and demonstrated that they were mildly resistant to accepting the current safe sleep recommendations.
- Further research would also be useful to ascertain how professionals relate information to adolescent mothers, specifically in relation to safe sleep recommendations. The lack of SIDS awareness or the ability to translate safe sleep 'principles' into a variety of sleep environments demonstrated by my participants was a concern and could potentially support the perpetuation of unsafe infant-care practices. The issue may lie in how information is provided to young mothers, specifically adolescent mothers, and warrants further investigation.

These are all areas that I would have liked to explore in more depth; and although I have provided evidence alluding to the impact of these elements on young

mothers' decision-making processes and their ability to apply safe infant-care practices, more research is required. IPA, alongside other qualitative methods, would be appropriate to investigate these suggested research areas.

11.6 Dissemination Strategy

Various aspects of this research, from literature reviews to findings, and my experiences of using IPA as a methodology, have been presented locally, nationally and internationally during the course of this doctorate; presentations and publications are listed in the preliminary section on page xvii, and conference presentations and seminars are listed in Appendix 14.

Future intentions for dissemination include delivering presentations of key findings to professionals, particularly local midwifery and health visiting teams, Family Nurse Partnership, iBumps and parent groups at local children's centres, all of whom were supportive of this research and requested that I returned to share my findings. I will aim to attend relevant conferences and to publish a range of articles in relevant journals in the near future.

I am incorporating my experience with IPA methodology into my teaching and supporting colleagues with the application and understanding of this methodology. I am currently supporting a master's student who has selected IPA as her methodology, and I am incorporating my research experience and research findings into my undergraduate teaching with children and young people's nursing students. These students have direct contact with parents and can apply what they have learned, reinforcing the safe sleep recommendations to parents, but also, they gain an understanding of the particular issues I have found from researching this group of parents. There are also opportunities within teaching to inspire students to recognise the value of research and how it can be applied in practice. I have already developed links with The Lullaby Trust, a charitable organisation in the UK that supports bereaved parents and aims to prevent unexpected infant deaths by supporting research and health education delivery to parents. I specifically want to link in with Little Lullaby, which is their young parent project, which aims to engage with parents under the age of 25, providing online support and education about safe sleep recommendations and reducing risks to their

infants. I have been invited to share my findings with the project group and engage with their young parent ambassadors; hopefully, there will also be the potential for exploring future research collaborations. I have also maintained links with colleagues who are researching similar topics and hope to collaborate with some of these researchers with projects in the future.

11.7 Final Reflections

This research, from inception to writing these closing remarks, has been a fascinating journey, both personally and professionally. I have been surprised by some of the data and getting to know these young women has been an education in itself, dismantling some of my previous assumptions about this 'client group' and their behaviour. By trying to understand what life is like for these young women, I have a new respect for how difficult and complex this transition to motherhood and adulthood is for them. They are doing a great job of being first-time mothers, with the best intentions for their infants, while negotiating the plethora of developmental tasks that adolescence demands. As professionals, it is our responsibility to meet this particular client group with the knowledge of what life is like for them. In order to support their transition to motherhood, professionals need to understand what adolescent mothers require and how to provide that effectively. I hope that this thesis provides a different perspective for professionals to consider when working with this often termed 'hard to reach and difficult group'.

REFERENCES

- Abdel-Rahman A, Dechkovskaia, A.M., Sutton, J.M., Chen, W.C., Guan, X., Khan, W.A. & Abou-Donia, M.B. (2005) Maternal exposure of rats to nicotine via infusion during gestation produces neurobehavioral deficits and elevated expression of glial fibrillary acidic protein in the cerebellum and CA1 subfield in the offspring at puberty. *Toxicology*, 2005 (209): 245-261.
- Action on Smoking and Health (ASH) (2016) *Smoking statistics: who smokes and how much*. [online] Available from: <http://ash.org.uk/> (Accessed 12.11.16).
- Ajao, T.I, Oden, R.P, Joyner, B.L. & Moon, R.Y. (2011) Decisions of black parents about infant bedding and sleep surfaces: a qualitative study. *Pediatrics*, 128 (3): 494-502.
- Ajzen, I. (2012) The Theory of Planned Behaviour. In: Van Lange, P., Kruglanski, A. and Higgins, E.T. (eds.) *Handbook of Social Psychological Theories*. London: Sage Publishing Ltd: 438 - 459.
- Ajzen, I. & Fishbein, M. (1980) *Understanding Attitudes and Predicting Social Behavior*. Englewood-Cliffs, NJ: Prentice-Hall.
- Allred, P. (2011) "How come I fell pregnant?": Young mothers' narratives of conception. *International Journal of Adolescence and Youth*, 16 (2): 139-156.
- Allen, G. (2011) *Early intervention: next steps*. London: HM Government.
- Alm, B., Wennergren, G., Norvenius, S.G., Skjaerven, R., Lagercrantz, H., Helweg-Larsen, K. & Irgens, L.M. (2002) Breast feeding and the sudden infant death syndrome in Scandinavia, 1992-95. *Archives of Disease in Childhood*, 86 (6): 400-402.
- Amaya-Amaya, M., Ryan, M. & San Miguel, F. (2005) "Irrational" stated preferences: a quantitative and qualitative investigation. *Health Economics*, 14 (3): 307-322.
- Anderson, H.R. & Cook, D.G. (1997) Passive smoking and sudden infant death syndrome: review of the epidemiological evidence. *Thorax*, 52 (11): 1003-1009.
- Anderson, L. (2008) Reflexivity. In: Thorpe, R. & Holt, R. (eds.) *The Sage Dictionary of Qualitative Management Research*. London: Sage: 183–185.
- Anderson, M.E., Johnson, D.C. & Batal, H.A. (2005) Sudden Infant Death Syndrome and prenatal maternal smoking: rising attributed risk in the Back to Sleep era. *BMC Medicine*, 11 (3): 4.

- Anderson, P. (2002) Assessment and development of executive function (EF) during childhood. *Child Neuropsychology*, 8 (2): 71-82.
- Appelt, K.C., Milch, K.F., Handgraaf, M.J.J. & Weber, E.U. (2011) The Decision Making Individual Differences Inventory and guidelines for the study of individual differences in judgment and decision-making research. *Judgment and Decision Making*, 6 (3): 252-262.
- Arai, L. (2007) Peer and neighbourhood influences on teenage pregnancy and fertility: Qualitative findings from research in English communities. *Health and Place*, 13 (1): 87-98.
- Ashford, K., Wiggins, A., Butler, K., Ickes, M., Rayens, M.K. & Hahn, E. (2016) e-Cigarette Use and Perceived Harm Among Women of Childbearing Age Who Reported Tobacco Use During the Past Year. *Nursing Research*, 65 (5): 408-414.
- Aveyard, H. (2014) *Doing a Literature Review in Health and Social Care: A Practical Guide*. Open University Press: McGraw-Hill Education.
- Baeza-Loya, S., Viswanath, H., Carter, A., Molfese, D.L., Velasquez, K.M., Baldwin, P., Thompson-Lake, D.G.Y., Sharp, C., Fowler, J.C., De La Garza, R. & Salas, R. (2014) Perceptions about e-cigarette safety may lead to e-smoking during pregnancy. *Bull Menninger Clinical*, 78 (3): 243-252.
- Bailey, B.A. & Sokol, R.J. (2011) Prenatal Alcohol Exposure and Miscarriage, Stillbirth, Preterm Delivery, and Sudden Infant Death Syndrome. *Alcohol Research & Health*, 34 (1): 86-91.
- Ball, H. (2002) Reasons to bed-share: why parents sleep with their infants. *Journal of Reproductive and Infant Psychology*, (20): 207-222.
- Ball, H.L. (2007) Bed-sharing practices of initially breastfed infants in the first 6 months of life. *Infant and Child Development*, 16 (4): 387-401.
- Ball, H.L., Howel, D., Bryant, A., Best, E., Russell, C. & Ward-Platt, M. (2016) Bed-sharing by breastfeeding mothers: who bed-shares and what is the relationship with breastfeeding duration? *Acta Paediatrica*, 105 (6): 628-634.
- Ball, H.L., Moya, E., Fairley, L., Westman, J., Oddie, S. & Wright, J. (2012) Infant care practices related to sudden infant death syndrome in South Asian and White British families in the UK. *Paediatric and Perinatal Epidemiology*, 26 (1): 3-12.
- Bandura, A. (1977) Self-efficacy: Toward a Unifying Theory of Behavioural Change. *Psychological Review*, 84 (2): 191-215.
- Bandura, A. (1986) *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall.

- Bandura, A. (1997) *Self-efficacy: the exercise of control*. New York: Freeman.
- Banister, E.N., Hogg, M.K. & Dixon, M. (2012) Using consumption in everyday resistance practices to contest negative stereotypes: The case of teenage mothers. *Advances in Consumer Research*, 40: 708-709.
- Banwell, C. & Bammer, G. (2006) Maternal habits: Narratives of mothering, social position and drug use. *International Journal of Drug Policy*, 17 (6): 504-513.
- Barcelos, C.A. & Gubrium, A.C. (2014) Reproducing stories: Strategic narratives of teen pregnancy and motherhood. *Social Problems*, 61 (3): 466-481.
- Barnes, J. & Henderson, J. (2012) *Summary of the the Formative Evaluation of the First Phase of the Group-based Family Nurse Partnership Programme*. London:DH
- Barnet, B., Duggan, A.K., Wilson, M.D. & Joffe, A. (1995) Association between postpartum substance use and depressive symptoms, stress, and social support in adolescent mothers. *Pediatrics*, 96 (4): 659-666.
- Batra, E.K, Teti, D.M., Schaefer, E.W., Neumann, B.A., Meek, E.A. & Paul, I.M. (2016) Nocturnal Video Assessment of Infant Sleep Environments. *Pediatrics*, 138 (3): e20161533
- Batra, E., Midgett, J.D. & Moon, R.Y. (2016) Hazards Associated with Sitting and Carrying Devices for Children Two Years and Younger. *The Journal of Pediatrics*, 167 (1): 183-187.
- Been, J.V., Mackay, D.F, Millett, C., Pell, J.P., van Schayck, O.C. & Sheikh, A. (2015) Impact of smoke-free legislation on perinatal and infant mortality: a national quasi-experimental study. *Scientific Reports*, 5: 13020.
- Beal, S.M. (1988) Sleeping position and SIDS. *The Lancet*, 332 (8609): 512.
- Beal, S.M. (2000) Sudden infant death syndrome in South Australia 1968-97. Part I: Changes over time. *Journal of Paediatrics and Child Health*, 36 (6): 540-547.
- Beal, S.M., Baghurst, P. & Antoniou, G. (2000) Sudden infant death syndrome (SIDS) in South Australia 1968-97. Part 2: The epidemiology of non-prone and non-covered SIDS infants. *Journal of Paediatrics and Child Health*, 36 (6): 548-551.
- Beck, C. (1994) Phenomenology: its use in nursing research. *International Journal of Nursing Studies*, 31 (6): 499-510.
- Berger, P. & Luckmann, T. (2011) *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. Open Road integrated media. New York.

Biggerstaff, D. & Thompson, A. (2008) Interpretative Phenomenological Analysis (IPA): a qualitative methodology of choice in healthcare research. *Qualitative Research in Psychology*, 5 (3): 214-224.

Black, S.E., Devereux, P.J. & Salvanes, K.G. (2013) Under pressure? The effect of peers on outcomes of young adults. *Journal of Labor Economics*, 31 (1): 119-153.

Blaikie, N. (2007) *Approaches to Social Inquiry*. 2nd Edition edn. Cambridge: Polity.

Blair, P.S & Ball, H.L. (2004) The prevalence and characteristics associated with parent-infant bed-sharing in England. *Archives of Disease in Childhood*, 89 (12): 1106-1110.

Blair, P.S., Fleming, P.J., Bensley, D., Smith, I., Bacon, C., Taylor, E., Berry, J., Golding, J., Tripp, J., Anson, L., Sodzi, R., Thompson, R., Wood, S., Ahronson, C., Cansfield, L., Davis, C., Griffin, M., Johnson, P., Lovelock, L., Middleton, L., Mueller, P., Stephenson, S., Taylor, D., Wright, L., Laws, C. & McCabe, R. (1996) Smoking and the sudden infant death syndrome: Results from 1993-5 case-control study for confidential inquiry into stillbirths and deaths in infancy. *British Medical Journal*, 1996; 313 (7051): 195-198.

Blair, P.S., Fleming, P.J., Smith, I.J., Ward-Platt, M., Young, J., Nadin, P., Berry, P.J. & Golding, J. (1999) Babies sleeping with parents: case-control study of factors influencing the risk of the sudden infant death syndrome. *British Medical Journal*, 1999; 319 (7223): 1457-1461.

Blair, P.S., Heron, J. & Fleming, P.J. (2010) Relationship Between Bed Sharing and Breastfeeding: Longitudinal, Population-Based Analysis. *Pediatrics*, 126 (5): e119-1126.

Blair, P.S., Mitchell, E.A., Heckstall-Smith, E.M.A. & Fleming, P.J. (2008) Head covering - a major modifiable risk factor for sudden infant death syndrome: a systematic review. *Archives of Disease in Childhood*, 93 (9): 778-783.

Blair, P.S., Ward-Platt, M., Smith, I.J., Fleming, P.J. & CESDI SUDI Research Group (2006a) Sudden Infant Death Syndrome and the time of death: factors associated with night-time and day-time deaths. *International Journal of Epidemiology*, 35 (6): 1563-1569.

Blair, P.S., Sidebotham, P., Berry, P.J., Evans, M. & Fleming, P.J. (2006b) Major epidemiological changes in sudden infant death syndrome: a 20-year population-based study in the UK. *Lancet*, 367 (9507): 314-319.

Blair, P.S., Ward-Platt, M., Smith, I.J. & Fleming, P.J. (2006c) Sudden infant death syndrome and sleeping position in pre-term and low birth weight infants: an opportunity for targeted intervention. *Archives of Disease in Childhood*, 91 (2): 101-106.

Blair, P.S., Sidebotham, P., Pease, A. & Fleming, P.J. (2014) Bed-Sharing in the Absence of Hazardous Circumstances: Is There a Risk of Sudden Infant Death Syndrome? An Analysis from Two Case-Control Studies Conducted in the UK. *PloS One*, 9 (9): e107799

Blair, P.S. Sidebotham, P., Evason-Coombe, C., Edmonds, M., Heckstall-Smith, E.M.A. & Fleming, P. (2009) Hazardous cosleeping environments and risk factors amenable to change: case-control study of SIDS in south west England. *British Medical Journal (Clinical research ed.)*, 2009; 339: b3666.

Blair, P. S., Pease, A., Bates, F., Ball, H., Thompson, J.M.D., Hauck, F.R., Moon, R., McEntire, B., Shatz, A., Cohen, M., Salm Ward, T.C. & Fleming, P. (2018) Concerns about the promotion of a cardboard baby box as a place for infants to sleep. *British Medical Journal*, 2018 (363): k4243

Blakemore, S. (2018) *Inventing Ourselves: The Secret Life of the Teenage Brain*. Suffolk: Transworld Publishers.

Breheny, M. & Stephens, C. (2010) Youth or disadvantage? The construction of teenage mothers in medical journals. *Culture, Health and Sexuality*, 12 (3): 307-322.

Breland, A., Soule, E., Lopez, A., Ramoa, C., El-Hellani, A. & Eissenberg, T. (2016) Electronic cigarettes: what are they and what do they do? *Annals of the New York Academy of Sciences*, (Addiction Reviews): 1-26.

Bright, F.M., Byard, R.W., Vink, R. & Paterson, D.S. (2017) Medullary Serotonin Neuron Abnormalities in an Australian Cohort of Sudden Infant Death Syndrome. *Journal of neuropathology and experimental neurology*, 76 (10): 864-873.

Britten, N. (1995) Qualitative interviews in medical research. *British Medical Journal*, 1995; 311 (6999): 251-253.

Brocki, J.M. & Wearden, A.J. (2014) *A critical evaluation of the use of interpretative phenomenological analysis (IPA) in health psychology*. In: Qualitative Research in Psychology. SAGE Benchmarks in Psychology, 3 (1). Sage.

Bronfenbrenner, U. (1979) *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, Ma: Harvard University Press.

- Brotherton, J.M.L., Hull, B.P., Hayen, A., Gidding, H.F. & Burgess, M.A. (2005) Probability of coincident vaccination in the 24 or 48 hours preceding sudden infant death syndrome death in Australia. *Pediatrics*, 115 (6): e643-646.
- Brown, A., Rance, J. & Warren, L. (2015) Body image concerns during pregnancy are associated with a shorter breast feeding duration. *Midwifery*, 31 (1): 80-89.
- Bruin, J.E., Gerstein, H.C. & Holloway, A.C. (2010) Long-Term Consequences of Foetal and Neonatal Nicotine Exposure: A Critical Review. *Toxicological Sciences*, 116 (2): 364-374.
- Burd, L. & Wilson, H. (2004) Foetal, infant, and child mortality in a context of alcohol use. *American Journal of Medical Genetics. Part C, Seminars in Medical Genetics*, 127C (1): 51-58.
- Burns, L., Conroy, E. & Mattick, R.P. (2010) Infant mortality among women on a methadone program during pregnancy. *Drug & Alcohol Review*, 29 (5): 551-556.
- Burns, E., Fenwick, J., Schmied, V. & Sheehan, A. (2012) Reflexivity in Midwifery Research: The insider/outsider Debate. *Midwifery*, 28 (1): 52.
- Byrne, M. (2001) Hermeneutics as a methodology for textual analysis. *Association of Operating Room Nurses Journal*, 73 (5): 968-970.
- Byrnes, J.P. (2002) The nature and development of decision making. *Journal of Adolescent Health*, 31: 208-215.
- Callahan, C.W. & Sisler, C. (1997) Use of seating devices in infants too young to sit. *Archives of Pediatrics & Adolescent Medicine*, 151 (3): 233-235.
- Campitelli, G. & Gobet, F. (2010) Herbert Simon's Decision-Making Approach: Investigation of Cognitive Processes in Experts. *Review of General Psychology*, 14 (4): 354-364.
- Caraballo, M., Shimasaki, S., Johnston, K., Tung, G., Albright, K. & Halbower, A. C. (2016) Knowledge, Attitudes, and Risk for Sudden Unexpected Infant Death in Children of Adolescent Mothers: A Qualitative Study. *Journal of Pediatrics*, 174: 78-83.
- Carpenter, R., McGarvey, C., Mitchell, E.A., Tappin, D.M., Vennemann, M.M., Smuk, M. & Carpenter, J.R. (2013) Bed sharing when parents do not smoke: is there a risk of SIDS? An individual level analysis of five major case-control studies. *British Medical Journal Open*, 2013 3 (5): e002299
- Carpenter, R.G., Irgens, L.M., Blair, P.S., England, P.D., Fleming, P., Huber, J., Jorch, G. & Schreuder, P. (2004) Sudden unexplained infant death in 20 regions in Europe: case control study. *Lancet*, 363 (9404): 185-191.

- Cassin, E. (2017) Do baby boxes really save lives? BBC News. [online] Available from: <http://www.bbc.co.uk/news/magazine-39366596> (Accessed 20.4.17)
- Charmaz, K. (2014) Grounded Theory. In: Smith, J.A., ed. *Qualitative Psychology. A Practical Guide to Research Methods*. 2nd edn. London: Sage
- Chong, D.S., Yip, P.S. & Karlberg, J. (2004) Maternal smoking: an increasing unique risk factor for sudden infant death syndrome in Sweden. *Acta Paediatrica*, 93 (4): 471-478.
- Christie, D. & Viner, R. (2005) Adolescent Development. *British Medical Journal*, 2005 (330): 301-304.
- Clancy, M. (2013) Is reflexivity the key to minimising problems of interpretation in phenomenological research? *Nurse Researcher*, 20 (6): 12-16.
- Clarke, K.A. (2009) Uses of a research diary: learning reflectively, developing understanding and establishing transparency. *Nurse Researcher*, 17 (1): 68-76.
- Clarke, N. (2013) Swaddling and hip dysplasia: an orthopaedic perspective. *Archives of Disease in Childhood*, 99 (1): 5-6.
- Cohen, L., Manion, L. & Morrison, K. (2007) *Research methods in education*. 6th edn. London, UK: Routledge.
- Coleman, T., Chamberlain, C., Cooper, S. & Leonardi-Bee, J. (2011) Efficacy and safety of nicotine replacement therapy for smoking cessation in pregnancy: systematic review and meta-analysis. *Addiction*, 106 (1): 52-61.
- Collins, E.C., Percy, E.J., Smith, E.R. & Kruschke, J.K. (2011) Integrating Advice and Experience: Learning and Decision Making With Social and Nonsocial Cues. *Journal of Personality and Social Psychology*, 100 (6): 697-682.
- Colson, E.R., Levenson, S., Rybin, D., Calianos, C., Margolis, A., Colton, T., Lister, G. & Corwin, M.J. (2006) Barriers to following the supine sleep recommendation among mothers at four centers for the Women, Infants, and Children Program. *Pediatrics*, 118 (2): e243-250.
- Colson, E. R., Geller, N.L., Heeren, T. & Corwin, M.J. (2017) Factors Associated With Choice of Infant Sleep Position. *Paediatrics*, 140 (3): e20170596.
- Colvin, J. D., Collie-Akers, V., Schunn, C. & Moon, R. Y. (2014) Sleep Environment Risks for Younger and Older Infants. *Pediatrics*, 134 (2): e406-412.
- Converse, M. (2012) Philosophy of phenomenology: how understanding aids research. *Nurse Researcher*, 20 (1): 28-32.

Côté, A., Bairam, A., Deschenes, M. & Hatzakis, G. (2008) Sudden infant deaths in sitting devices. *Archives of Disease in Childhood*, 93 (5): 384-389.

Cote, A., Gerez, T., Brouillette, R.T. & Laplante, S. (2000) Circumstances leading to a change to prone sleeping in sudden infant death syndrome victims. *Pediatrics*, 106 (6): e86.

Coventry, Solihull and Warwickshire SCB (2014) *Death Review Panel Annual Report 2013 - 2014*. [online] Available from: <https://apps.warwickshire.gov.uk/api/documents/wccc-850-352> (Accessed 20.11.14)

Cowan, S. (2015) *Their First Five Hundred Sleeps: Pēpi-Pod Report 2012-2014*. [online] Available from: www.pepipod.co.nz (Accessed 21.4.17).

Cowan, S., Pease, A. & Bennett, S. (2013) Usage and impact of an online education tool for preventing sudden unexpected death in infancy. *Journal of Paediatrics and Child Health*, 49 (3): 228-232.

Cozzi, F., Albani, R. & Cardi, E. (1979) A common pathophysiology for sudden cot death and sleep apnea. "The vacuum-glossoptosis syndrome". *Medical Hypotheses*, (5): 329-338.

Critical Appraisal Skills Programme (2014a) CASP Cohort Research Checklist. [online] Available from: <https://casp-uk.net> (Accessed 21.10.13).

Critical Appraisal Skills Programme (2014b) CASP Case Control Research Checklist. [online] Available from: <https://casp-uk.net> (Accessed 21.10.13).

Critical Appraisal Skills Programme (2014c) CASP Qualitative Research Checklist. [online] Available from: <https://casp-uk.net> (Accessed 21.10.13).

Critical Appraisal Skills Programme (2014d) CASP RCT Research Checklist. [online] Available from: <https://casp-uk.net> (Accessed 21.10.13).

Crossan, F. (2004) Research philosophy: Towards an understanding. *Nurse Researcher*, 11 (1): 46-55.

Crotty, M. (1996) *Phenomenology and Nursing Research*. Melbourne: Churchill Livingstone.

Crotty, M. (1998) *The Foundations of Social Research: Meaning and Perspective in the Research Process*. Crows Nest, New South Wales, Australia: Allen & Unwin.

Dansereau, D.F., Knight, D.K. & Flynn, P.M. (2013) Improving adolescent judgment and decision making. *Professional Psychology: Research and Practice*, 44 (4): 274-282.

Darawsheh, W. (2014) Reflexivity in research: Promoting rigour, reliability and validity in qualitative research. *International Journal of Therapy and Rehabilitation*, 21 (12): 560-568.

Denzin, N. & Lincoln, Y. (eds.) (2000) *Handbook of Qualitative Research*. 2nd edn. Thousand Oaks, California: Sage.

Department for Children, Schools and Families (2010) *Teenage Pregnancy Strategy: Beyond 2010*. London: HM Government.

Department for Communities and Local Government (2011) *The English Indices of Deprivation 2010*. London: HM Government.

Department for Communities and Local Government (2015) *The English Indices of Deprivation*. [online] Available from: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015> (Accessed 10.5.16).

Department for Education (2006) *Working Together to Safeguard Children*. London: HM Government.

Department for Education (2014) *Child Death Reviews: Year Ending March 2014*. London: HM Government.

Department for Education (2015) *Working Together to Safeguard Children*. London: HM Government.

Department of Health (2007) *Implementation Plan for Reducing Health Inequalities in Infant Mortality: A Good Practice Guide*. Health Inequalities Unit. London: HM Government.

Department of Health (2009) *Healthy Child Programme – pregnancy and the first five years*. London: HM Government.

Department of Health (2010a) *Equity and Excellence: Liberating the NHS*. London: HM Government.

Department of Health (2010b) *Tackling Health Inequalities in Infant and Maternal Health Outcomes Report*. London: HM Government.

Department of Health (2012) *Issues emerging from the first 10 pilot sites implementing the Nurse-Family Partnership home-visiting programme in England*. London: HM Government. [online] Available from: www.gov.uk (Accessed 10.11.14).

Department of Health (2013) *Improving outcomes and supporting transparency*. London: HM Government.

Department of Health (2016) *UK Chief Medical Officers' Alcohol Guidelines Review*. London: HM Government.

Derby City & Derbyshire County NHS (2014) *Derbyshire Safe Sleep Assessment Policy*. [online] Available from: www.northderbyshireccg.nhs.uk/.../Safeguarding_/.../17_Safe_sleeping_. (Accessed 10.1.15).

Dibley, L. (2011) Analysing narrative data using McCormack's Lenses. *Nurse Researcher*, 18 (3): 13-19.

DiFranza, J.R., Aligne, C.A. & Weitzman, M. (2004) Prenatal and postnatal environmental tobacco smoke exposure and children's health. *Pediatrics*, 113 (Suppl) 1007-1015.

Doody, O. & Noonan, M. (2013) Preparing and conducting interviews to collect data. *Nurse Researcher*, 20 (5): 28-32.

Dowdell, J., Fenwick, J., Bartu, A. & Sharp, J. (2009) Midwives' descriptions of the postnatal experiences of women who use illicit substances: A descriptive study. *Midwifery*, 25 (3): 295-306.

Dowling, M. (2004) Hermeneutics: an exploration. *Nurse Researcher*, 11 (4): 30-39.

Dowling, M. (2007) From Husserl to Van Manen: a review of different phenomenological approaches. *International Journal of Nursing Studies*, 44 (1): 131-142.

Duncan, J.R., Randall, L.L., Belliveau, R.A., Trachtenberg, F.L., Randall, B., Habbe, D., Mandell, F., Welty, T.K., Iyasu, S. & Kinney, H.C. (2008) The effect of maternal smoking and drinking during pregnancy upon (3)H-nicotine receptor brainstem binding in infants dying of the sudden infant death syndrome: initial observations in a high risk population. *Brain Pathology*, 18 (1): 21-31.

Duncan, S. (2007) What's the problem with teenage parents? And what's the problem with policy? *Critical Social Policy*, 27 (3): 307-334.

Ellis, C., Roland, D. & Blair, M.E. (2014) Professional educational interventions designed to improve knowledge and uptake of immunisation. *Community Practitioner*, 86 (6): 20-23.

Ellis-Sloan, K. (2014) Teenage mothers, stigma and their 'presentations of self'. *Sociological Research Online*, 19 (1): 1-12.

- Elwyn, G. & Miron-Shatz, T. (2010) Deliberation before determination: the definition and evaluation of good decision making. *Health Expectations*, 13 (2): 139-147.
- England, L.J., Anderson, B.L., Tong, V.T.K., Mahoney, J., Coleman-Cowger, V.H., Melstrom, P. & Schulkin, J. (2014) Screening practices and attitudes of obstetricians-gynecologists toward new and emerging tobacco products. *American Journal of Obstetrics and Gynecology*, 211 (695): e1-7.
- England, L.J., Bunnell, R.E., Pechacek, T.F., Tong, V.T. & McAfee, T.A. (2015) Nicotine and the Developing Human A Neglected Element in the Electronic Cigarette Debate. *American Journal of Preventive Medicine*, 49 (2): 286-293.
- Epstein, J. & Jolly, C. (2009) Credibility gap? Parents' beliefs about reducing the risk of cot death. *Community Practitioner*, 82 (11): 21-24.
- Epstein, J. & Jolly, C. (2011) Cot death risks: on display. *Community practitioner: the journal of the Community Practitioners' & Health Visitors' Association*, 84 (2): 36-37.
- Epstein, J., Jolly, C. & Mullan, L. (2011) A review of images of sleeping infants in UK magazines and on the internet. *Community Practitioners' & Health Visitors' Association*, 84 (9): 23-26.
- Epstein, J. & McLoughlin, A. (2002) Reducing the risk of cot death -- do manufacturers and retailers of baby bedding products help or hinder? *Community Practitioner*, 75 (11): 414-416.
- Erikson, E. (1995) *Childhood and society*. London: Vintage.
- Ernst, M., Moolchan, E.T. & Robinson, M.L. (2001) Behavioral and neural consequences of prenatal exposure to nicotine. *Journal of American Academic Child and Adolescent Psychiatry*, (40): 630-641.
- Ewing, G., Rogers, M., Barclay, S., McCabe, J., Martin, A. & Todd, C. (2004) Recruiting patients into a primary care based study of palliative care: why is it so difficult? *Palliative Medicine*, 18 (5): 452-459.
- Fastring, D., Mayfield-Johnson, S. & Madison, J. (2017) Evaluation of a Health Education Intervention to Improve Knowledge, Skills, Behavioral Intentions and Resources Associated with Preventable Determinants of Infant Mortality. *Diversity & Equality in Health Care*, 14 (6): 290-295.
- Ferguson, B.B., Wilson, D. & Schaffner, W. (1976) Determination of nicotine concentrations in human milk. *American Journal of Diseases of Children*, (130): 837-839.

- Filiano, J.J. & Kinney, H.C. (1994) A perspective on neuropathologic findings in victims of the sudden infant death syndrome: the triple-risk model. *Biology of the Neonate*, (65): 194-197.
- Fink, A. (2014) *Conducting Research Literature Reviews: From the Internet to Paper*. 4th edn. Thousand Oaks, California: Sage.
- Fishbein, M. & Ajzen, I. (1975) *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
- Fleming, P. & Blair, P.S. (2007) Sudden Infant Death Syndrome and parental smoking. *Early Human Development*, 83 (11): 721-725.
- Fleming, P., Tsogt, B. & Blair, P.S. (2006) Modifiable risk factors, sleep environment, developmental physiology and common polymorphisms: Understanding and preventing sudden infant deaths. *Early Human Development*, 82 (12): 761-766.
- Fleming, P.J., Blair, P.S., Bacon, C., Bensley, D., Smith, I., Taylor, E., Berry, J., Golding, J., Tripp, J.Z., Anson, L., Sodzi, R., Thompson, R., Wood, S., Ahronson, C., Cansfield, L., Davis, C., Griffin, M., Johnson, P., Lovelock, L., Middleton, L., Mueller, P., Stephenson, S., Taylor, D., Wright, L., Laws, C. & McCabe, R. (1996) Environment of infants during sleep and risk of the sudden infant death syndrome: Results of 1993-5 case-control study for confidential inquiry into stillbirths and deaths in infancy. *British Medical Journal*, 1996; 313 (7051): 191-195.
- Fleming, P.J., Blair, P.S. & Mitchell, E.A. (2002) Mattresses, microenvironments, and multivariate analyses. *British Medical Journal*, 2002; 2 (325): 981-2.
- Fleming, P.J., Blair, P.S., Ward Platt, M., Tripp, J. & Smith, I.J. (2003) Sudden infant death syndrome and social deprivation: assessing epidemiological factors after post-matching for deprivation. *Paediatric and Perinatal Epidemiology*, 17 (3): 272-280.
- Fleming, P.J., Blair, P.S., Pollard, K., Ward Platt, M., Leach, C., Smith, I., Berry, P.J., Golding, J. & CESDI SUDI Research Team (1999) Pacifier use and sudden infant death syndrome: results from the CESDI/SUDI case control study. *Archives of Disease in Childhood*, 81 (2): 112-116.
- Fleming, P.J., Blair, P.S. & Pease, A. (2015) Sudden unexpected death in infancy: aetiology, pathophysiology, epidemiology and prevention in 2015. *Archives of Disease in Childhood*, 100 (10): 984-988.
- Fleming, P.J., Gilbert, R. & Azaz, Y. (1990) Interaction between bedding and sleeping position in the sudden infant death syndrome: A population-based case-control study. *British Medical Journal*, 1990; 301 (6743): 85-89.

Fleming, P.J., Gilbert, R., Azaz, Y., Berry, P.J., Rudd, P.T., Stewart, A., Hall, E. Blair, P.S., Bacon, C. & Berry, P.J. (2000) *Sudden Unexpected Death in Infancy: The CESDI SUDI Studies 1993 - 1996*. London: TSO.

Fletcher, J.M. (2011) The effects of teenage childbearing on the short and long-term health behaviors of mothers. *Journal of Population Economics*, 25 (1): 201-218.

Forfar, J.O., Arneil, G.C., Cambell, A.G.M. & McIntosh, N. (1998) *Forfar and Arneil's textbook of pediatrics*. New York: Churchill Livingstone.

Franco, P., Scaillet, S., Groswasser, J. & Kahn, A. (2004) Increased cardiac autonomic responses to auditory challenges in swaddled infants. *Sleep*, 27 (8): 1527-1532.

Franco, P., Scaillet, S., Wermenbol, V., Valente, F., Groswasser, J. & Kahn, A. (2000) The influence of a pacifier on infants' arousals from sleep. *Journal of Pediatrics*, 136 (6): 775-779.

Freyne, B., Hamilton, K., Mc Garvey, C., Shannon, B., Matthews, T.G. & Nicholson, A.J. (2014) Sudden unexpected death study underlines risks of infants sleeping in sitting devices. *Acta Paediatrica*, 103 (3): e130-132.

Friend, K.B., Goodwin, M.S. & Lipsitt, L.P. (2004) Alcohol use and sudden infant death syndrome. *Developmental Review*, 24 (3): 235-251.

Galland, B.C., Taylor, B.J. & Bolton, D.P.G. (2002) Prone versus supine sleep position: A review of the physiological studies in SIDS research. *Journal of Paediatrics and Child Health*, 2002 (38): 332-338.

Gao, Y.J., Holloway, A. & Zeng, Z.H. (2005) Prenatal exposure to nicotine causes postnatal obesity and altered perivascular adipose tissue function. *Obesity Research*, 2005 13 (4): 687-692.

Gao, Y.J., Holloway, A.C., Su, L.Y., Takemori, K., Lu, C. & Lee, R. (2008) Effects of foetal and neonatal exposure to nicotine on blood pressure and perivascular adipose tissue function in adult life. *European Journal of Pharmacology*, 590 (1-3): 264-268.

Garcia, A.J. III, Koschnitzky, J.E. & Ramirez, J.M. (2013) The physiologic determinants of Sudden Infant Death Syndrome. *Respiratory and Physiological Neurobiology*, 189 (2): 288-300.

Gardner, R. (1996) The nurse researcher: an added dimension to qualitative research methodology. *Nursing inquiry*, 1996 (3): 153-158.

Garstang, J., Ellis, C., Griffiths, F. & Sidebotham, P. (2016) Unintentional asphyxia, SIDS, and medically explained deaths: a descriptive study of outcomes of child death review (CDR) investigations following sudden unexpected death in infancy. *Forensic Science Medicine and Pathology*, 12 (4): 407-415.

Gergen, K.J. (2007) *Social Construction in Context*. London: Sage.

Gibbons, F.X., Houlihan, A.E. & Gerrard, M. (2009) Reason and reaction: The utility of a dual-focus, dual-processing perspective on promotion and prevention of adolescent health risk behaviour. *British Journal of Health Psychology*, 14 (2): 231-248.

Gigerenzer, G. (2008) Why Heuristics Work. *Perspectives on Psychological Science*, 3 (1): 20-29.

Gilbert, R.E., Wigfield, R.E., Fleming, P.J., Berry, P.J. & Rudd, P.T. (1995) Bottle feeding and the sudden infant death syndrome. *British Medical Journal (Clinical research ed.)*, 1995; 310: 88-90.

Gilchrist, A. (2016) *Little Lullaby Evaluation 2014-2016*. The Lullaby Trust, London.

Glaser, B.G. & Strauss, A. (1967) *The Discovery of Grounded Theory*. Hawthorne NY: Aldine de Gruyter.

Glinge, C. (2018) *SIDS Risk Up Fourfold in Siblings of SIDS Victims*. IN: European Heart Rhythm Association (EHRA). Conference: Barcelona.

Gilliss, C.L., Lee, K.A., Gutierrez, Y., Taylor, D., Beyene, Y., Neuhaus, J. & Murrell, N. (2001) Recruitment and Retention of Healthy Minority Women into Community-Based Longitudinal Research. *Journal of Women's Health & Gender-Based Medicine*, 10 (1): 77-85

Golding, J. (1997) Sudden infant death syndrome and parental smoking - a literature review. *Paediatric and Perinatal Epidemiology*, 11 (1): 67-77.

Goodstein, M.H., Lagon, E., Bell, T., Joyner, B.L. & Moon, R.Y. (2018) Stock Photographs Do Not Comply With Infant Safe Sleep Guidelines. *Clinical Pediatrics*, 57 (4): 403-409.

Gordon, A.E., Saadi, A.T., MacKenzie, D.A.C., Molony, N., James, V.S., Weir, D.M., Busuttil, A. & Blackwell, C.C. (1999) The protective effect of breast feeding in relation to sudden infant death syndrome (SIDS): III. Detection of IgA antibodies in human milk that bind to bacterial toxins implicated in SIDS. *FEMS Immunology and Medical Microbiology*, 25 (1-2): 175-182.

- Greenhalgh, T. (2010) *How to Read a Paper: The Basics of Evidence-Based Medicine*. 4th edn. Chichester: Wiley-Blackwell.
- Guba, E.G. & Lincoln, Y.S. (1994) Competing paradigms in qualitative research. In: Denzin, N.K. & Lincoln, Y.S., (eds.) *Handbook of Qualitative Research*. Thousand Oaks CA: Sage: 105-117.
- Guntheroth, W.G. & Spiers, P.S. (2002) The triple risk hypotheses in sudden infant death syndrome. *Pediatrics*, 110 (5): e64
- Hall, G.S. (1904) *Adolescence: its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion and education*. New York: D Appleton.
- Hall, A.K., Cole-Lewis, H. & Bernhardt, J.M. (2015) Mobile Text Messaging for Health: A Systematic Review of Reviews. *Annual Review of Public Health*, 36 (36): 393-415.
- Hammersley, M. & Atkinson, P. (2007) *Ethnography: Principles in Practice*. 3rd edn. London: Routledge.
- Hand, H. (2003) The mentor's tale: a reflective account of semi-structured interviews. *Nurse Researcher*, 10 (3): 15-27.
- Harding, S. (1987) Introduction: is there a feminist method? In: Harding, S. (ed.) *Feminism and Methodology*. Milton Keynes: Open University Press
- Hauck, F.R., Herman, S.M., Donovan, M., Iyasu, S., Moore, C.M., Donoghue, E., Kirschner, R. H. & Willinger, M. (2003) Sleep environment and the risk of sudden infant death syndrome in an urban population: The Chicago infant mortality study. *Pediatrics*, 111 (5): 1207-1214.
- Hauck, F.R., Omojokun, O.O. & Siadat, M.S. (2005) Do pacifiers reduce the risk of sudden infant death syndrome? A meta-analysis. *Pediatrics*, 116 (5): e716-723.
- Hauck, F.R. & Tanabe, K.O. (2008) International trends in sudden infant death syndrome: Stabilization of rates requires further action. *Pediatrics*, 122 (3): 660-666.
- Hauck, F.R., Thompson, J.M.D., Tanabe, K.O., Moon, R.Y. & Vennemann, M.M. (2011) Breastfeeding and Reduced Risk of Sudden Infant Death Syndrome: A Meta-analysis. *Pediatrics*, 128 (1): 103-110.
- Hauck, F. (2014) *Evaluation of bedtime basics for babies: A U.S. crib distribution program to reduce the risk of sleep-related sudden infant deaths*. IN: ISPID. Conference: Amsterdam.

- Hauck, F.R., Darnall, R.A. & Moon, R.Y. (2014) Parent-Infant Bedsharing Is Not Recommended. *Journal of the American Medical Association Pediatrics*, 168 (4): 387-387.
- Hauck, F.R., Signore, C., Fein, S.B. & Raju, T.N.K. (2008) Infant sleeping arrangements and practices during the first year of life. *Pediatrics*, 122 Suppl 2 S113-S120.
- Hawkins, R. P., Han, J.Y., Pingree, S., Shaw, B.R., Baker, T.B. & Roberts, L.J. (2010) Interactivity and presence of three eHealth interventions. *Computers in Human Behavior*, 26 (5): e1081-1088.
- Hawkins, R.P., Kreuter, M., Resnicow, K., Fishbein, M. & Dijkstra, A. (2008) Understanding tailoring in communicating about health. *Health Education Research*, 23 (3): e454-466.
- Head, K.J., Noar, S.M., Iannarino, N.T. & Harrington, N.G. (2013) Efficacy of text messaging-based interventions for health promotion: A meta-analysis. *Social Science & Medicine*, 97 (2013): 41-48.
- Heere, M. (2017) Temple Study Shows that Baby Boxes, Combined with Personalized Sleep Education, Reduced Rates of a Key Unsafe Infant Sleep Practice during First Week of Infancy. [online] Available from: <https://medicine.temple.edu/.../temple-study-shows-baby-boxes-combined-personalize>. (Accessed 28.5.17)
- Heidegger, M., MacQuarrie, J. & Robinson, E. (1962) *Being and Time*. Malden, MA: Blackwell.
- Herman, S., Adkins, M. & Moon, R.Y. (2015) Knowledge and Beliefs of African-American and American Indian Parents and Supporters About Infant Safe Sleep. *Journal of Community Health*, 40 (1): 12-19.
- Hight, A.R., Berry, A.M., Bettelheim, K.A. & Goldwater, P.N. (2014) Gut microbiome in sudden infant death syndrome (SIDS) differs from that in healthy comparison babies and offers an explanation for the risk factor of prone position. *International Journal of Medical Microbiology*, 304 (5-6): 735-741.
- Higgins, S.T., Washio, Y., Heil, S.H., Solomon, L.J., Gaalema, D.E., Higgins, T.M. & Bernstein, I.M. (2012) Financial incentives for smoking cessation among pregnant and newly postpartum women. *Preventive Medicine*, 55 Suppl: S33-40.
- Hoddinott, P., Tappin, D. & Wright, C. (2008) Breast feeding. *British Medical Journal*, 2008; (336): 881.

- Holloway, A.C., Lim, G.E. & Petrik, J.J. (2005) Foetal and neonatal exposure to nicotine in Wistar rats results in increased beta cell apoptosis at birth and postnatal endocrine and metabolic changes associated with type 2 diabetes. *Diabetologia*, 48 (12): 2661-2666.
- Holloway, I. & Wheeler, S. (2010) *Qualitative Research in Nursing and Healthcare*. 3rd edn. Oxford: Wiley-Blackwell.
- Horne, R.S.C., Hauck, F.R. & Moon, R.Y. (2015) Sudden infant death syndrome and advice for safe sleeping. *British Medical Journal*, 2015; 350: 1989
- Houghton, C., Casey, D., Shaw, D. & Murphy, K. (2013) Rigour in qualitative case-study research. *Nurse Researcher*, 20 (4): 12-17.
- Hughes, C.L. (2014) *Developing Reflexivity in Research*. [online] Available from: www2.warwick.ac.uk/fac/soc/sociology/.../developing_reflexivity_in_research.docx (Accessed 10.8.16).
- Jaafar, S.H., Ho, J.J., Jahanfar, S. & Angolkar, M. (2016) Effect of restricted pacifier use in breastfeeding term infants for increasing duration of breastfeeding. *Cochrane Database Systematic Reviews*, 30 (8): CD007202.
- Jackson, A. & Moon, R.Y. (2008) An analysis of deaths in portable cribs and playpens: What can be learned? *Clinical Pediatrics*, 47 (3): 261-266.
- Jasper, M. (2005) Using reflective writing within research. *Journal of Research in Nursing*, 10 (3): 247-260.
- Jenkins, R.O. & Sherburn, R.E. (2005) Growth and survival of bacteria implicated in sudden infant death syndrome on cot mattress materials. *Journal of Applied Microbiology*, 99 (3): 573-579.
- Jessiman, W. (2013) 'To be honest, I haven't even thought about it' – recruitment in small-scale, qualitative research in primary care. *Nurse Researcher*, 21 (2): 18-23.
- Joyner, B.L., Oden, R.P. & Moon, R.Y. (2016) Reasons for Pacifier Use and Non-Use in African-Americans: Does Knowledge of Reduced SIDS Risk Change Parents' Minds? *Journal of Immigrant and Minority Health*, 18 (2): 402-410.
- Joyner, B., Goodstein, M., Zeichner, E. & Moon, R. (2014) *Infant Sleep Environments Depicted in Stock Photographs and Magazines Targeted to Women of Childbearing Age*. IN: ISPID. Conference: Amsterdam.
- Joyner, B.L., Gill-Bailey, C. & Moon, R.Y. (2009) Infant sleep environments depicted in magazines targeted to women of childbearing age. *Pediatrics*, 124 (3): e416-422.

- Kadakia, A., Joyner, B., Tender, J., Oden, R. & Moon, R.Y. (2015) Breastfeeding in African Americans may not depend on sleep arrangement: a mixed-methods study. *Clinical Pediatrics*, 54 (1): 47-53.
- Kamra, P. & Pitt, M.B. (2018) Sleeping on the Job: Unsafe Infant Sleep Environments Depicted in the News Coverage of the 2016 AAP Safe Sleep Recommendations. *Journal of Communication in Healthcare*, 11 (3): 223-227.
- Kaplan, D.W., Feinstein, R.A., Fisher, M.M., Klein, J.D., Olmedo, L.F. & Rome, E.S. (2001) Care of adolescent parents and their children. *Pediatrics*, 107 (2): 429-434.
- Karabulut, E., Yalcin, S.S., Ozdemir-Geyik, P. & Karaagaoglu, E. (2009) Effect of pacifier use on exclusive and any breastfeeding: A meta- analysis. *The Turkish Journal of Pediatrics*, 51 (1): 35-43.
- Kassa, H., Moon, R.Y. & Colvin, J.D. (2016) Risk Factors for Sleep-Related Infant Deaths in In-Home and Out-of-Home Settings. *Pediatrics*, 138 (5): e20161124
- Kelmanson, I. (2013) Swaddling: Maternal option and sleep behaviour in two-month-old infants. *Child Care in Practice*, 19 (1): 36-48.
- Kelmanson, I.A., Erman, L.V. & Litvina, S.V. (2002) Maternal smoking during pregnancy and behavioural characteristics in 2 - 4-month-old infants. *Klinische Padiatrie*, 214 (6): 359-364.
- Kemp, J.S., Livne, M., White, D.K. & Arfken, C.L. (1998) Softness and potential to cause rebreathing: Differences in bedding used by infants at high and low risk for sudden infant death syndrome. *Journal of Pediatrics*, 132 (2): 234-239.
- Kendall-Tackett, K., Cong, Z. & Hale, T.W. (2010) Mother–Infant Sleep Locations and Nighttime Feeding Behavior: US Data from the Survey of Mothers' Sleep and Fatigue. *Clinical Lactation*, 1 (1): 27-31.
- King, N. & Horrocks, C. (2010) *Interviews in Qualitative Research*. London: Sage Publications.
- Klonoff-Cohen, H. & Lam-Kruglick, P. (2001) Maternal and paternal recreational drug use and sudden infant death syndrome. *Archives of Pediatrics & Adolescent Medicine*, 155 (7): 765-770.
- Klonoff-Cohen, H.S., Edelstein, S.L., Lefkowitz, E.S., Srinivasan, I.P., Kaegi, D., Chang, J.C. & Wiley, K.J. (1995) The effect of passive smoking and tobacco exposure through breast milk on sudden infant death syndrome. *Journal of the American Medical Association*, 273 (10): 795-798.

Koch, T. (1996) Implementation of a hermeneutic inquiry in nursing: philosophy, rigour and representation. *Journal of Advanced Nursing*, 24 (1): 174-84.

Krous, H.F., Beckwith, J.B., Byard, R.W., Rognum, T.O., Bajanowski, T., Corey, T., Cutz, E., Hanzlick, R., Keens, T.G. & Mitchell, E.A. (2004) Sudden infant death syndrome and unclassified sudden infant deaths: a definitional and diagnostic approach. *Pediatrics*, 114 (1): 234-238.

Kuhnert, R., Schlaud, M., Poethko-Mueller, C., Vennemann, M., Fleming, P., Blair, P.S., Mitchell, E., Thompson, J. & Hecker, H. (2012) Reanalyses of case-control studies examining the temporal association between sudden infant death syndrome and vaccination. *Vaccine*, 30 (13): 2349-2356.

Kvale, S. & Brinkmann, S. (1996) *InterViews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA: Sage.

Lagon, E., Moon, R.Y. & Colvin, J.D. (2018) Characteristics of Infant Deaths during Sleep While Under Nonparental Supervision. *Journal of Pediatrics*, 2018; 197:57-62.

Lambert, V., Glacken, M. & McCaroon, M. (2011) Employing an ethnographic approach: key characteristics. *Nurse Researcher*, 19 (1): 17-24.

Lancashire Safeguarding Children Board (2014) *Pan-Lancashire Child Death Overview Panel Annual Report 2013-14*. [online] Available from: <http://www.lancshiresafeguarding.org.uk/media/7226/CDOP-annual-report-13-14-Public.pdf> (Accessed 10.1.15).

Larkin, M., Watts, S. & Clifton, E. (2006) Giving voice and making sense in interpretative phenomenological analysis. *Qualitative Research in Psychology*, 3 (2): 102-120.

Lawrence, J., Xiao, D. & Xue, Q. (2008) Prenatal nicotine exposure increases heart susceptibility to ischemia/ reperfusion injury in adult offspring. *Journal of Pharmacology and experimental therapeutics*, 324 (1): 331-341.

Lee, H. (2013) Why Finnish babies sleep in cardboard boxes. BBC News. [online] Accessed from: <http://www.bbc.co.uk/news/magazine-22751415>. (Accessed 10.2.17)

Leese, M. (2014) The bumpy road to 'becoming': Capturing the stories that teenage mothers told about their journey into motherhood. *Child and Family Social Work*, 21 (4): 521-529.

- Lesko, S.M., Corwin, M.J., Vezina, R.M., Hunt, C.E., Mandell, F., McClain, M., Heeren, T. & Mitchell, A.A. (1998) Changes in sleep position during infancy: a prospective longitudinal assessment. *Journal of the American Medical Association*, 280 (4): 336-340.
- Leslie, H. & McAllister, M. (2002) The benefits of being a nurse in critical social research practice. *Qualitative Health Research*, 12 (5): 700-712.
- Li, D.K., Petitti, D.B., Willinger, M., McMahon, R., Odouli, R., Vu, H. & Hoffman, H.J. (2003) Infant sleeping position and the risk of sudden infant death syndrome in California, 1997-2000. *American Journal of Epidemiology*, 157 (5): 446-455.
- Li, D.K., Willinger, M., Petitti, D.B., Odouli, R., Liu, L.Y. & Hoffman, H.J. (2006) Use of a dummy (pacifier) during sleep and risk of sudden infant death syndrome (SIDS): population based case-control study. *British Medical Journal*, 2006; 332 (7532): 18-21.
- Liamputtong, P. (2007) *Researching the Vulnerable: A Guide to Sensitive Research Methods*. London: Sage.
- Licqurish, S. & Seibold, C. (2011) Applying a contemporary grounded theory methodology. *Nurse Researcher*, 18 (4): 11-16.
- Liebrechts-Akkerman, G., Lao, O., Liu, F., van Sleuwen, B.E., Engelberts, A.C., L'Hoir M.P., Tiemeier, H.W. & Kayser, M. (2011) Postnatal parental smoking: an important risk factor for SIDS. *European Journal of Pediatrics*, 170 (10): 1281-1291.
- Limerick, S.R. & Bacon, C.J. (2004) Terminology used by pathologists in reporting on sudden infant deaths. *Journal of Clinical Pathology*, 57 (3): 309-311.
- Liu, J., Rosenberg, K.D. & Sandoval, A.P. (2006) Breastfeeding duration and perinatal cigarette smoking in a population-based cohort. *American Journal Public Health*, (96): 309-314.
- Luciana, M. & Collins, P.F. (2012) Incentive Motivation, Cognitive Control, and the Adolescent Brain: Is It Time for a Paradigm Shift. *Child Development Perspectives*, 6 (4): 392-399.
- Lumley, J., Chamberlain, C., Dowswell, T., Oliver, S., Oakley, L. & Watson, L. (2009) Interventions for promoting smoking cessation during pregnancy. *Cochrane Database of Systematic Reviews*, 8 (3): CD001055
- MacDorman, M.F., Cnattingius, S., Hoffman, H.J., Kramer, M.S. & Haglund, B. (1997) Sudden infant death syndrome and smoking in the United States and Sweden. *American Journal of Epidemiology*, 146 (3): 249-257.

- Mackey, S. (2005) Phenomenological nursing research: methodological insights derived from Heidegger's interpretive phenomenology. *International Journal of Nursing Studies*, 42 (2): 179-186.
- Macvarish, J. (2010a) The effect of 'risk-thinking' on the contemporary construction of teenage motherhood. *Health, Risk and Society*, 12 (4): 313-322.
- Macvarish, J. (2010b) Understanding the significance of the teenage mother in contemporary parenting culture. *Sociological Research Online*, 15 (4): 3.
- Majeed, B.A., Weaver, S.R., Gregory, K.R., Whitney, C.F., Slovic, P., Pechacek, T.F. & Eriksen, M.P. (2016) Changing Perceptions of Harm of E-Cigarettes Among U.S. Adults, 2012–2015. *American Journal of Preventative Medicine*, 52 (3): 331-338.
- Maritz, G. (2013) Perinatal exposure to nicotine and implications for subsequent obstructive lung disease. *Paediatric Respiratory Review*, 14 (1): 3-8.
- Mark, K.S., Farquhar, B., Chisolm, M.S., Coleman-Cowger, V.H. & Terplan, M. (2015) Knowledge, attitudes, and practice of electronic cigarette use among pregnant women. *Journal of Addiction Medicine*, 9 (4): 266-272.
- Marmot, M. (2010) *Fair Society, Healthy Lives: strategic Review of health Inequalities in England Post 2010*. London: HMSO
- Mathews, A., Joyner, B.L., Oden, R.P., He, J.P., McCarter, R. & Moon, R.Y. (2016a) Messaging Affects the Behavior of African American Parents with Regards to Soft Bedding in the Infant Sleep Environment: A Randomized Controlled Trial. *Journal of Pediatrics*, 2016; 175: 79-85.
- Mathews, A., Oden, R., Joyner, B., He, J.P., McCarter, R. & Moon, R.Y. (2016b) Differences in African-American Maternal Self-Efficacy Regarding Practices Impacting Risk for Sudden Infant Death. *Journal of Community Health*, 41 (2): 244-249.
- McBride, C.M., Emmons, K.M. & Lipkus, I.M. (2003) Understanding the potential of teachable moments: the case of smoking cessation. *Health Education Research*, 18 (2): 156-170.
- McBride, C.M., Pirie, P.L. & Curry, S.J. (1992) Postpartum relapse to smoking: a prospective study. *Health Education Research*, 7 (3): 381-390.
- McDonagh, J.E. (2018) The age of adolescence and young adulthood. *The Lancet*, 2 (4): e6.
- McDonnell, E. & Moon, R.Y. (2014) Infant deaths and injuries associated with wearable blankets, swaddle wraps, and swaddling. *The Journal of pediatrics*, 164 (5): 1152-1156.

- McGarvey, C., McDonnell, M., Hamilton, K., O'Regan, M. & Matthews, T. (2006) An 8 year study of risk factors for SIDS: bed-sharing versus non-bed-sharing. *Archives of Disease in Childhood*, 91 (4): 318-323.
- McKenna, J.J. & McDade, T. (2005) Why babies should never sleep alone: a review of the co- sleeping controversy in relation to SIDS, bedsharing and breast feeding. *Paediatric Respiratory Review*, 6 (2): 134-152.
- McMillan, B., Green, J. M., Woolridge, M. W., Dyson, L., Renfrew, M.J. & Clarke, G.P. (2009) Studying the infant feeding intentions of pregnant women experiencing material deprivation: Methodology of the Looking at Infant Feeding Today (LIFT) study. *Social Science and Medicine*, 68 (5): 845-849.
- McVea, K.L., Turner, P.D. & Peppler, D.K. (2000) The role of breastfeeding in sudden infant death syndrome. *Journal of human lactation*, 16 (1): 13-20.
- Medical Dictionary Online (2017) *Medical Dictionary Online*. [online] Available from: <http://medical-dictionary.thefreedictionary.com/high-risk+group> (Accessed 2.7.17).
- Meyer, L.E. & Erler, T. (2011) Swaddling: a traditional care method rediscovered. *World journal of pediatrics*, 7 (2): 155-160.
- Milligan, L. (2014) Insider-Outsider-Inbetweener? Researcher Positioning, Participative Methods and Cross-Cultural Educational Research. *Compare: A Journal of Comparative and International Education*, 46 (2) 235-250
- Miller, L.H., Fraser, A. & Moy, R. (2008) How does cot death prevention advice influence parents' behaviour? *Child Care Health and Development*, 34 (5): 613-618.
- Mills, A., Schmied, V., Taylor, C., Dahlen, H., Schuiringa, W. & Hudson, M.E. (2012) Connecting, learning, leaving: Supporting young parents in the community. *Health and Social Care in the Community*, 20 (6): 663-672.
- Mitchell, E.A. (2007) Sudden infant death syndrome: should bed sharing be discouraged? *Archives of Pediatrics and Adolescent Medicine*, 161 (3): 305-306.
- Mitchell, E.A., Blair, P.S. & L'Hoir, M.P. (2006) Should pacifiers be recommended to prevent sudden infant death syndrome? *Pediatrics*, 117 (5): 1755-1758.
- Mitchell, E.A., Ford, R.P., Stewart, A.W., Taylor, B.J., Becroft, D.M., Thompson, J.M., Scragg, R., Hassall, I.B., Barry, D.M.J., Allen, E.M. & Roberts, A.P. (1993) Smoking and the sudden infant death syndrome. *Pediatrics*, 91 (5): 893-896.
- Mitchell, E.A. & Milerad, J. (2006) Smoking and the sudden infant death syndrome. *Reviews on Environmental Health*, 21 (2): 81-103.

Mitchell, E.A., Scragg, R., Stewart, A., Becroft, D.M., Taylor, B.J., Ford, R.P., Hassall, I.B., Barry, D.M., Allen, E.M. & Roberts, A.P. (1991) Results from the first year of the New Zealand cot death study. *New Zealand Medical Journal*, 1991 104 (906): 71-6.

Mitchell, E.A., Thompson, J.M., Becroft, D.M., Bajanowski, T., Brinkmann, B., Happe, A., Jorch, G., Blair, P.S., Sauerland, C. & Vennemann, M.M. (2008) Head covering and the risk for SIDS: findings from the New Zealand and German SIDS case-control studies. *Pediatrics*, 121 (6): e1478-1483.

Mitchell, E.A., Thompson, J.M., Ford, R.P. & Taylor, B.J. (1998) Sheepskin bedding and the sudden infant death syndrome. New Zealand Cot Death Study Group. *Journal of Pediatrics*, 133 (5): 701-704.

Mitchell, E.A., Tuohy, P.G., Brunt, J.M., Thompson, J.M.D., Clements, M.S., Stewart, A.W., Ford, R.P.K. & Taylor, B.J. (1997) Risk Factors for Sudden Infant Death Syndrome Following the Prevention Campaign in New Zealand: A Prospective Study. *Pediatrics*, 1997; 100: 835-840.

Mitchell, E.A., Williams, S.M. & Taylor, B.J. (1999) Use of duvets and the risk of sudden infant death syndrome. *Archives of Disease in Childhood*, 81 (2): 117-119.

Mitchell, M. (2014) Depth Interviewing Workshop 2nd & 3rd December. NatCen Social Research: London, UK.

Moon, R.Y., Oden, R.P., Joyner, B.L. & Ajao, T.I. (2010) Qualitative Analysis of Beliefs and Perceptions about Sudden Infant Death Syndrome in African-American Mothers: Implications for Safe Sleep Recommendations. *Journal of Pediatrics*, 157 (1): 92-97.

Moon, R.Y., Tanabe, K.O., Yang, D.C., Young, H.A. & Hauck, F.R. (2012) Pacifier use and SIDS: evidence for a consistently reduced risk. *Maternal and child health journal*, 16 (3): 609-614.

Moon, R.Y. & Hauck, F.R. (2015) Updating SIDS risk reduction advice has the potential to further reduce infant deaths in Sweden. *Acta Paediatrica*, 104 (5): 434-435.

Moon, R.Y. & Task Force Sudden Infant Death Syndrome. (2016) SIDS and Other Sleep-Related Infant Deaths: Evidence Base for 2016 Updated Recommendations for a Safe Infant Sleeping Environment. *Pediatrics*, 138 (5): e20162940

Moon, R.Y., Mathews, A., Joyner, B.L., Oden, R.P., He, J.P. & McCarter, R. (2017a) Impact of a Randomized Controlled Trial to Reduce Bedsharing on Breastfeeding Rates and Duration for African-American Infants. *Journal of Community Health*, 42 (4): 707-715.

Moon, R.Y., Hauck, F.R., Colson, E.R., Kellams, A.L., Geller, N.L., Heeren, T., Kerr, S. M., Drake, E.E., Tanabe, K., McClain, M. & Corwin, M.J. (2017b) The Effect of Nursing Quality Improvement and Mobile Health Interventions on Infant Sleep Practices A Randomized Clinical Trial. *Journal of the American Medical Association*, 318 (4): 351-359.

Moon, R.Y., Hauck, F.R., Kellams, A.L., Colson, E.R., Geller, N.L., Heeren, T.C., Kerr, S.M. & Corwin, M.J. (2017c) Comparison of Text Messages Versus E-mail When Communicating and Querying With Mothers About Safe Infant Sleep. *Academic Pediatrics*, 17 (8): 871-878.

Moon, R.Y. & Hauck, F.R. (2017) Are There Long-term Consequences of Room-Sharing During Infancy? *Pediatrics*, 140 (1): e20171323.

Moran, D. (2000) *Introduction to Phenomenology*. London: Routledge.

Moscovis, S.M., Hall, S.T., Burns, C.J., Scott, R.J. & Blackwell, C.C. (2014) The male excess in sudden infant deaths. *Innate immunity*, 20 (1): 24-29.

Mosley, J.M., Stokes, S.D. & Ulmer, A. (2007) Infant sleep position: Discerning knowledge from practice. *American Journal of Health Behavior*, 31 (6): 573-582.

Moule, P. & Goodman, M. (2014) *Nursing Research – An Introduction*. 2nd edn. London: Sage Publications.

Mullen, P. (2004) How can more smoking suspension during pregnancy become lifelong abstinence? Lessons learned about predictors, interventions, and gaps in our accumulated knowledge. *Nicotine and Tobacco Research*, 6 (suppl 2): S217-238.

Muneoka, K., Ogawa, T. & Kamei, K. (1997) Prenatal nicotine exposure affects the development of the central serotonergic system as well as the dopaminergic system in rat offspring: involvement of route of drug administrations. *Brain Research. Developmental Brain Research*, 102 (1): 117-126.

Muneoka, K., Ogawa, T. & Kamei, K. (2001) Nicotine exposure during pregnancy is a factor which influences serotonin transporter density in the rat brain. *European Journal of Clinical Pharmacology*, 411 (3): 279-282.

Myung, S.K., Ju, W., Jung, H.S., Park, C.H., Oh, S.W., Seo, H.G. & Kim, H.S. (2012) Efficacy and safety of pharmacotherapy for smoking cessation among pregnant smokers: a meta-analysis. *International Journal of Obstetrics and Gynaecology*, 119 (9): 1029-1039.

Naimi, T.S., Lipscomb, L.E., Brewer, R.D. & Gilbert, B.C. (2003) Binge drinking in the preconception period and the risk of unintended pregnancy: implications for women and their children. *Pediatrics*, 111 (5): 1136-1141.

- Nayak, A. & Kehily, M.J. (2014) 'Chavs, chavettes and pramface girls': teenage mothers, marginalised young men and the management of stigma. *Journal of Youth Studies*, 17 (10): 1330-1345.
- Nelson, A.M. (2012) A Comprehensive Review of Evidence and Current Recommendations Related to Pacifier Usage. *Journal of Pediatric Nursing-Nursing Care of Children & Families*, 27 (6): 690-699.
- Nesbitt, S.A., Campbell, K.A., Jack, S.M., Robinson, H., Piehl, K. & Bogdan, J.C. (2012) Canadian adolescent mothers' perceptions of influences on breastfeeding decisions: A qualitative descriptive study. *BMC Pregnancy and Childbirth*, 12 (12): 149.
- NHS Digital (2015) *Statistics on Women's Smoking Status at Time of Delivery, England - Quarter 4, 2014-15*. [online] Available from: <http://content.digital.nhs.uk/catalogue/PUB17668> (Accessed 10.4.16).
- National Institute for Health and Care Excellence. (2015) *Postnatal care up to 8 weeks after birth*. [online] Available from: <https://www.nice.org.uk/guidance/cg37> (Accessed 18.4.16).
- Nichter, M., Nichter, N., Adrian, S., Goldade, K., Tesler, L. & Muramoto, M. (2008) Smoking and harm-reduction efforts among postpartum women. *Qualitative Health Research*, 18 (9): 1184-1194.
- Northington, L., Graham, J., Winters, K. & Fletcher, A. (2011) Assessing Knowledge of Sudden Infant Death Syndrome among African American women in two Mississippi communities. *Journal of Cultural Diversity*, 18 (3): 95-100.
- O'Leary, C.M., Jacoby, P.J., Bartu, A., D'Antoine, H. & Bower, C. (2013) Maternal Alcohol Use and Sudden Infant Death Syndrome and Infant Mortality Excluding SIDS. *Pediatrics*, 131 (3): e770-778.
- Oden, R.P., Powell, C., Sims, A., Weisman, J., Joyner, B.L. & Moon, R.Y. (2012) Swaddling: will it get babies onto their backs for sleep? *Clinical Pediatrics*, 51 (3): 254-259.
- Odendaal, H.J., Steyn, D.W., Elliott, A. & Burd, L. (2009) Combined effects of cigarette smoking and alcohol consumption on perinatal outcome. *Gynecologic and Obstetric Investigation*, 67 (1): 1-8.
- Office for National Statistics (2015) *Unexplained Deaths in Infancy: England and Wales, 2013*. [online] Available from: <https://www.ons.gov.uk/.../birthsdeathsandmarriages/deaths/.../unexplaineddeathsinf> (Accessed 20.1.14)

Office for National Statistics (2016a) *Unexplained deaths in infancy, England and Wales: 2015*. [online] Available from: <https://www.ons.gov.uk/.../birthsdeathsandmarriages/deaths/.../unexplaineddeathsinf> (Accessed 1.6.16)

Office for National Statistics (2016b) *Baby Names Statistics Girls*. [online] Available from: <https://www.ons.gov.uk/.../birthsdeathsandmarriages/livebirths/.../babynamesengland> (Accessed 20.7.16)

Office for National Statistics (2018) *Unexplained deaths in infancy, England and Wales: 2016*. [online] Available from: <https://www.ons.gov.uk/.../birthsdeathsandmarriages/deaths/.../unexplaineddeathsinf> (Accessed 26.11.18)

Olds, D. (2006) The Nurse-Family Partnership: An evidence-based preventive intervention. *Infant Mental Health Journal*, 127 (1): 5-25.

Olds, D.L., Henderson, C.R., Tatelbaum, R. & Chamberlin, R. (1986) Improving the delivery of prenatal-care and outcomes of pregnancy - a randomized trial of nurse home visitation. *Pediatrics*, 77 (1): 16-28.

Ostfeld, B.M., Esposito, L., Perl, H. & Hegyi, T. (2010) Concurrent Risks in Sudden Infant Death Syndrome. *Pediatrics*, 125 (3): 447-453.

Ostfeld, B.M., Esposito, L., Straw, D., Burgos, J. & Hegyi, T. (2005) An inner-city school-based program to promote early awareness of risk factors for sudden infant death syndrome. *Journal of Adolescent Health*, 37 (4): 339-341.

Ostfeld, B.M., Schwartz-Soicher, O., Reichman, N.E., Teitler, J.O. & Hegyi, T. (2017) Prematurity and Sudden Unexpected Infant Deaths in the United States. *Pediatrics*, 140 (1): e20163334.

Oyen, N., Haglund, B., Skjaerven, R. & Irgens, L.M. (1997) Maternal smoking, birthweight and gestational age in sudden infant death syndrome (SIDS) babies and their surviving siblings. *Paediatric and Perinatal Epidemiology*, 11 (Suppl 1): 84-95.

Paley, J. (2017) *Phenomenology as Qualitative Research: A critical analysis of meaning attribution*. Routledge. Oxon.

Paterson, D.S., Trachtenberg, F.L., Thompson, E.G., Belliveau, R.A., Beggs, A.H., Darnall, R., Chadwick, A.E., Krous, H.F. & Kinney, H.C. (2006) Multiple serotonergic brainstem abnormalities in sudden infant death syndrome. *Journal of the American Medical Association*, 296 (17): 2124-2132.

- Paul, I.M., Hohman, E.E., Loken, E., Savage, J.S., Anzman-Frasca, S., Carper, P., Marini, M.E. & Birch, L.L. (2017) Mother-Infant Room-Sharing and Sleep Outcomes in the INSIGHT Study. *Pediatrics*, 140 (1): e20170122.
- Payne, J., Elliott, E., D'Antoine, H., O'Leary, C., Mahony, A., Haan, E. & Bower, C. (2005) Health professionals' knowledge, practice and opinions about foetal alcohol syndrome and alcohol consumption in pregnancy. *Australian and New Zealand Journal of Public Health*, 29 (6): 558-564.
- Peachman, R. (2017) Put Your Baby in a Box? Experts Advise Caution. *The New York Times*. [online] Available from: <https://www.nytimes.com/2017/05/.../put-your-baby-in-a-box-experts-advise-caution>. (Accessed 6.6.17).
- Peacock, N., Altfeld, S., Rosenthal, A., Garland, C., Massino, J., Smith, S., Rowe, H. & Wagener, S. (2018) Qualitative Analysis of Infant Safe Sleep Public Campaign Messaging. *Health Promotion Practice*, 19 (2): 203-212.
- Pease, A., Flemming, P.J., Ingram, J. & Blair, P.S. (2014) *What do mothers know about SIDS risk factors in the UK: Results from a cross sectional survey*. IN: ISPID. Conference: Amsterdam.
- Pease, A.S. (2015) *Factors influencing infant care practices in the sleep environment among families at high risk of sudden infant death syndrome*. Unpublished PhD Thesis. Bristol: University of Bristol.
- Pease, A.S., Fleming, P.J., Hauck, F.R., Moon, R.Y., Horne, R.S.C., L'Hoir, M.P., Ponsonby, A. & Blair, P.S. (2016) Swaddling and the Risk of Sudden Infant Death Syndrome: A Meta-analysis. *Pediatrics*, 137 (6): e20153275.
- Pease, A., Blair, P.S., Ingram, J. & Fleming, P.J. (2017a) Mothers' knowledge and attitudes to sudden infant death syndrome risk reduction messages: results from a UK survey. *Archives of Disease in Childhood*, 103 (1): 33-38.
- Pease, A., Ingram, J., Blair, P.S. & Fleming, P.J. (2017b) Factors influencing maternal decision-making for the infant sleep environment in families at higher risk of SIDS: a qualitative study. *British Medical Journal Paediatrics Open*, 2017; (1): e000133
- Petosa, R.L. & Smith, L.H. (2014) Peer Mentoring for Health Behavior Change: A Systematic Review. *American Journal of Health Education*, 45 (6): 351-357.
- Phillips, D.P., Brewer, K.M. & Wadensweiler, P. (2011) Alcohol as a risk factor for sudden infant death syndrome (SIDS). *Addiction*, 106 (3): 516-525.
- Pisinger, C. & Dossing, M. (2014) A systematic review of health effects of electronic cigarettes. *Preventive Medicine*, Dec; (69): 248-260.

- Piaget, J. & Inhelder, B. (1969) *The Psychology Of The Child*. New York: Basic Books.
- Polit, D. F. & Beck, C.T. (2010) Generalization in Quantitative and Qualitative Research: Myths and Strategies. *International Journal of Nursing Studies*, 47 (11): 1451-8.
- Ponsford, R. (2011) Consumption, resilience and respectability amongst young mothers in Bristol. *Journal of Youth Studies*, 14 (5): 541-560.
- Ponsonby, A.L., Dwyer, T., Gibbons, L.E., Cochrane, J.A. & Wang, Y.G. (1993) Factors potentiating the risk of sudden infant death syndrome associated with prone position. *New England Journal of Medicine*, 1993 (329): 377-382.
- Ponsonby, A.L., Dwyer, T., Kasl, S.V. & Cochrane, J.A. (1995) The Tasmanian SIDS Case-Control Study: univariable and multivariable risk factor analysis. *Paediatric and Perinatal Epidemiology*, 9 (3): 256-272.
- Powney, J. & Watts, M. (1987) *Interviewing in Educational Research*. London: Routledge.
- Pringle, J., Drummond, J., McLafferty, E. & Hendry, C. (2011) Interpretative phenomenological analysis: a discussion and critique. *Nurse Researcher*, 18 (3): 20-24.
- Prochaska, J.O. & Velicer, W.F. (1997) The transtheoretical model of health behavior change. *American Journal of Health Promotion*, 12 (1): 38-48.
- Racher, F. & Robinson, S. (2003) Are phenomenology and postpositivism strange bedfellows? *Western Journal of Nursing Research*, 25 (5): 464-481.
- Rallings, J. (2014) *What are children's centres for?* Barnardo's. London.
- Ray, M.A. (1994) The richness of phenomenology: philosophic, theoretic, and methodologic concerns. In: Morse, J.M. (ed.) *Critical Issues in Qualitative Research Methods*. Thousand Oaks Ca: Sage Publications.
- Rechtman, L.R., Colvin, J.D., Blair, P.S. & Moon, R.Y. (2014) Sofas and Infant Mortality. *Pediatrics*, 134 (5): e1293-1300.
- Renzetti, C.M. (1997) Confessions of a Reformed Positivist: Feminist Participatory Research as Good Social Science. In: Schwartz, M.D. (ed.) *Researching Sexual Violence Against Women: Methodological and Personal Perspectives*. Thousand Oaks, Ca: Sage Publications.

Ribary, U. & Lichtensteiger, W. (1989) Effects of acute and chronic prenatal nicotine treatment on central catecholamine systems of male and female rat foetuses and offspring. *Journal of Pharmacology and experimental therapeutics* 248 (2): 786-792.

Richardson, H.L., Walker, A.M. & Horne, R.S.C. (2009) Minimizing the Risks of Sudden Infant Death Syndrome: To Swaddle or Not to Swaddle? *Journal of Pediatrics*, 155 (4): 475-481.

Richardson, H.L., Walker, A.M. & Horne, R.S.C. (2010) Influence of swaddling experience on spontaneous arousal patterns and autonomic control in sleeping infants. *The Journal of pediatrics*, 157 (1): 85-91.

Richardson, H.L., Walker, A.M. & Horne, R.S.C. (2008) Sleep position alters arousal processes maximally at the high-risk age for sudden infant death syndrome. *Journal Sleep Research*, 2008 17 (4): 450-457.

Ritchie, J., Lewis, J., McNaughton-Nicholls, C. & Ormston, R. (eds.)(2014) *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. 2nd edn. London: Sage.

Robling, M., Bekkers, M-J., Bell, K., Butler, C.C., Cannings-John, R., Channon, S., Martin, B.C., Gregory, J.W., Hood, K., Kemp, A., Kenkre, J., Montgomery, A.A., Moody, G., Owen-Jones, E., Pickett, K., Richardson, G., Roberts, Z.E.S., Ronaldson, S., Sanders, J., Stamuli, E. & Torgerson, D. (2016) Effectiveness of a nurse-led intensive home-visitation programme for first-time teenage mothers (Building Blocks): a pragmatic randomised controlled trial. *The Lancet*, 387 (10014): 146-155.

Robson, C. (2011) *Real World Research*. Oxford, UK: Blackwell Publishing Ltd.

Rodger, J. (2017) How Coventry mums can get a FREE Baby Box this month. *Coventry Telegraph*. [online] Available from: <http://www.coventrytelegraph.net/whats-on/family-kids-news/how-coventry-mums-can-free-13328338> (Accessed 20.7.17)

Rolfe, A. (2008) 'You've got to grow up when you've got a kid': Marginalized young women's accounts of motherhood. *Journal of Community and Applied Social Psychology*, 18 (4): 299-314.

Romagnoli, A. & Wall, G. (2012) 'I know I'm a good mom': Young, low-income mothers' experiences with risk perception, intensive parenting ideology and parenting education programmes. *Health, Risk and Society*, 14 (3): 273-289.

Royal College of Pathologists & Royal College of Paediatrics and Child Health (2004) *Sudden unexpected death in infancy. A multi-agency protocol for care and investigation. The Report of a working group convened by the Royal College of Pathologists and the Royal College of Paediatrics and Child Health*. [online] Available from: <http://www.rcpch.ac.uk> (Accessed 20.10.13).

Rubin, H.J. & Rubin, I.S. (2013) *Qualitative Interviewing: The Art of Hearing Data*. 3rd edn. Thousand Oaks, CA: Sage Publications.

Ruys, J.H., de Jonge, G.A., Brand, R., Engelberts, A.C. & Semmekrot, B.A. (2007) Bed-sharing in the first four months of life: a risk factor for sudden infant death. *Acta paediatrica*, 96 (10): 1399-1403.

Sackett, D.L., Strauss, S.E., Richardson, W.S., Rosenberg, W. & Haynes, R.B. (2000) *Evidence based medicine: how to practice and teach EBM*. 2nd edn. Edinburgh: Churchill Livingstone.

Salford Safeguarding Children Board (2014) *Annual Report 2013-14*. [online] Available from: [http://www.partnersinsalford.org/sscb/documents/SSCB Annual Report 2013-14.pdf](http://www.partnersinsalford.org/sscb/documents/SSCB%20Annual%20Report%202013-14.pdf) (Accessed 10.1.15).

Sameroff, A.J. (ed.) (2009) *The Transactional Model of Development: How Children and Contexts Shape Each Other*. Washington DC: American Psychologist Association.

Sammons, P., Hall, J., Smees, R., Goff, J., Sylva, K., Smith, T., Evangelou, M., Eisenstadt, N. & Smith, G. (2015) *The impact of children's centres: studying the effects of children's centres in promoting better outcomes for young children and their families*. London: HM Government.

Sandelowski, M. (1994) We Are the Stories We Tell. Narrative Knowing in Nursing Practice. *Journal of Holistic Nursing*, 1994 (12): 23-33.

Sandelowski, M. (2000) Whatever Happened to Qualitative Description? *Research in Nursing & Health*, (23): 334-340.

Sangalang, B.B. & Rounds, K. (2005) Differences in health behaviors and parenting knowledge between pregnant adolescents and parenting adolescents. *Social Work in Health Care*, 42 (2): 1-22.

Sawczenko, A. & Fleming, P.J. (1996) Thermal stress, sleeping position, and the sudden infant death syndrome. *Sleep*, 19 (10): 269-270.

Sawyer, S.M., Afifi, R.M., Bearinger, L.H., Blakemore, S.J., Dick, B., Ezeh, A.C. & Patton, G.C. (2012) Adolescence: a foundation for future health. *The Lancet*, (379): 1630-1640.

Sawyer, S. M., Azzopardi, P.S., Wickremarathne, D. & Patton, G.C. (2018) The age of adolescence. *The Lancet*, 2018 (2): 223-228.

Schmidt, L.K. (2014) *Understanding Hermeneutics*. London: Routledge

Scragg, R.K. & Mitchell, E.A. (1998) Side sleeping position and bed sharing in the sudden infant death syndrome. *Annals of Medicine*, 30 (4): 345-349.

Scragg, R.K.R., Mitchell, E.A., Stewart, A.W., Ford, R.P.K., Taylor, B.J., Hassall, I.B., Williams, S.M. & Thompson, J.M.D. (1996) Infant room-sharing and prone sleep position in sudden infant death syndrome. *The Lancet*, 347 (8993): 7-12.

Seidler, F.J., Levin, E.D., Lappi, S.E. & Slotkin, T.A. (1992) Foetal nicotine exposure ablates the ability of postnatal nicotine challenge to release norepinephrine from rat brain regions. *Brain Research. Developmental Brain Research*, (69): 288-291.

Sekhon, H.S., Keller, J.A., Benowitz, N.L. & Spindel, E.R. (2001) Prenatal nicotine exposure alters pulmonary function in newborn rhesus monkeys. *American Journal of Respiratory and Critical Care Medicine*, 164 (6): 989-994.

Shapiro-Mendoza, C.K., Colson, E.R., Willinger, M., Rybin, D.V, Camperlengo, L. & Corwin, M.J. (2015) Trends in infant bedding use: National Infant Sleep Position study, 1993-2010. *Pediatrics*, 135 (1): 10-17.

Sherburn, R.E. & Jenkins, R.O. (2004) Cot mattresses as reservoirs of potentially harmful bacteria and the sudden infant death syndrome. *FEMS Immunology and Medical Microbiology*, 42 (1): 76-84.

Sherburn, R.E. & Jenkins, R.O. (2005) Aerial release of bacteria from cot mattress materials and the sudden infant death syndrome. *Journal of Applied Microbiology*, 98 (2): 293-298.

Shrivastava, A., Davis, P. & Davies, D. (1997) SIDS: parental awareness and infant care practices in contrasting socioeconomic areas in Cardiff. *Archives of Disease in Childhood*, 77 (1): 52-53.

Sidebotham, P., Bates, F., Ellis, C. & Lyus, L. (2018) Preventative Strategies for Sudden Infant Death Syndrome. In: Duncan, J.R. & Byard, R.W. (eds.) *Sudden infant and early childhood death: The past, the present and the future*. Adelaide: University of Adelaide Press.

Simon, H.A. (1972) Theories of Bounded Rationality. In: McGuire C.B. & Radner, R. (eds.) *Decision and Organisation*. North-Holland Publishing Company: Amsterdam.

Simpson, A.R. (2001) *Raising Teens: A synthesis or reserch and a foundation for action*. Center for Health Communication.

- Smith, J. A. (2011) 'We could be diving for pearls': the value of the gem in experiential qualitative psychology. *QMP Bulletin 12: October 2011*.
- Smith, J., Flowers, P. & Larkin, M. (2009) *Interpretative Phenomenological Analysis. Theory, Method and Research*. London, UK: Sage.
- Smith, J.A., Jarman, M. & Osborn, M. (1999). Doing interpretative phenomenological analysis. In M. Murray and K. Chamberlain (Eds.) *Qualitative Health Psychology: theories and methods*. London, Sage.
- Smith, J.A. & Osborn, M. (2014) Interpretative Phenomenological Analysis. In: Smith, J.A. (ed.) *Qualitative psychology: A practical guide to methods*. London, UK: Sage
- SmithBattle, L. (2006) Family legacies in shaping teen mothers' caregiving practices over 12 years. *Qualitative Health Research*, 16 (8): 1129-1144.
- SmithBattle, L. (2013) Reducing the Stigmatization of Teen Mothers. *American Journal of Maternal-Child Nursing*, 38 (4): 235-241.
- Smylie, J., Fell, D.B., Chalmers, B., Sauve, R., Royle, C., Allan, B. & O'Campo, P. (2014) Socioeconomic position and factors associated with use of a nonsupine infant sleep position: findings from the Canadian Maternity Experiences Survey. *American Journal Public Health*, 104 (3): 539-547.
- Snowdon, C. (2016) *The dilemma of choosing where your baby sleeps*. [online] Available from: <http://www.bbc.co.uk/news/business-37731421> (Accessed 24.10.16).
- Solomon, L.J., Higgins, S.T., Heild, S.H., Badgere, G.J., Thomase, C.S. & Bernstein, I.M. (2007) Predictors of Postpartum Relapse to Smoking. *Journal of alcoholism and drug dependence*, 8 (90): 224-227.
- Spencer, N. & Logan, S. (2004) Sudden unexpected death in infancy and socioeconomic status: a systematic review. *Journal of Epidemiology and Community Health*, 58 (5): 366-373.
- Spiers, J., Smith, J.A. & Drage, M. (2015) A longitudinal interpretative phenomenological analysis of the process of kidney recipients' resolution of complex ambiguities within relationships with their living donors. *Journal of Health Psychology*, 21 (11): 2600-2611.
- Strauss, A. & Corbin, J. (1990) *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. 2nd edn. Newbury Park CA: Sage.
- Stevens, R. (1983) *Erik Erikson*. Milton Keynes: The Open University Press.

Sultan, H. & Raju, S. (2016) *Derby City and Derbyshire Child Death Overview Panel Annual Report April 2015 to March 2016*. [online] Available from: https://www.derbyscb.org.uk/media/derby-scb/content-assets/documents/annual-reports-and-governance/DSCB_AnnualReport_15-16_and_BusinessPlan_16-17_Final_Complete_DfE_261016.pdf (Accessed 31.3.17).

Suter, M.A., Mastrobattista, J., Sachs, M. & Aagaard, K. (2014) Is There Evidence for Potential Harm of Electronic Cigarette Use in Pregnancy? *Birth Defects Research. Part A Clinical and molecular teratology*, 103 (3): 186–195.

Tappin, D., Bauld, L., Purves, D., Boyd, K., Sinclair, L., MacAskill, S., McKell, J., Friel, B., McConnachie, A., de Caestecker, L., Tannahill, C., Radley, A., Coleman, T. & Cessation Pregnancy Incentives. (2015) Financial incentives for smoking cessation in pregnancy: randomised controlled trial. *British Medical Journal*, 2015; 350: 134.

Tappin, D., Brooke, H., Ecob, R. & Gibson, A. (2002) Used infant mattresses and sudden infant death syndrome in Scotland: case-control study. *British Medical Journal*, 2002; 325 (7371): 1007-1009.

Tappin, D., Ecob, R., Stat, S.R. & Brooke, H. (2005) Bedsharing, roomsharing, and sudden infant death syndrome in Scotland: A case-control study. *Journal of Pediatrics*, 147 (1): 32-37.

The Lullaby Trust (2014) *Bubbalicious*. [online] Available from: <http://www.bubbalicious.co.uk/> (Accessed 30.11.14).

The Lullaby Trust (2018) *Safer Sleep Advice*. [online] Available from: <https://www.lullabytrust.org.uk/safer-sleep-advice/> (Accessed 26.11.18).

Thompson, E.L. & Moon, R.Y. (2016) Hazard Patterns Associated With Co-sleepers. *Clinical Pediatrics*, 55 (7): 645-649.

Thompson, J.M.D., Tanabe, K., Moon, R.Y., Mitchell, E.A., McGarvey, C., Tappin, D., Blair, P.S. & Hauck, F.R. (2017) Duration of Breastfeeding and Risk of SIDS: An Individual Participant Data Meta-analysis. *Pediatrics*, 140 (5): e20171324.

Thomson, R., Martin, J.L. & Sharples, S. (2015) The experience of couples being given an oxygen concentrator to use at home: A longitudinal interpretative phenomenological analysis. *Journal of Health Psychology*, 22 (6): 798-810.

Tipene-Leach, D. & Abel, S. (2010) The wahakura and the safe sleeping environment. *Journal of Primary Health Care*, 2 (1): 81.

Trachtenberg, F.L., Haas, E.A., Kinney, H.C., Stanley, C. & Krous, H.F. (2012) Risk Factor Changes for Sudden Infant Death Syndrome After Initiation of Back-to-Sleep Campaign. *Pediatrics*, 129 (4): 630-638.

Twenge, J.M. & Park, H. (2017) The Decline in Adult Activities Among U.S. Adolescents, 1976-2016. *Child Development*, [online] Available at: <https://www.ncbi.nlm.nih.gov/pubmed/28925063> (Accessed: 17.12.18)

UNICEF UK Baby Friendly Initiative (2010) Caring for your baby at night: A guide for parents. [online] Available at: <https://www.unicef.org.uk/babyfriendly/baby-friendly-resources/sleep-and-night-time-resources/caring-for-your-baby-at-night/> (Accessed: 10.1.14)

Unluer, S. (2012) Being an Insider Researcher While Conducting Case Study Research. *The Qualitative Report*, 17 (29): 1-14.

Van Sleuwen, B.E., Engelberts, A.C., Boere-Boonekamp, M.M., Kuis, W., Schulpen, T.W.J. & L'Hoir, M.P. (2007) Swaddling: a systematic review. *Pediatrics*, 120 (4): e1097-1106.

Van Sleuwen, B.E., L'Hoir, M.P. & Engelberts, A.C. (2006) Comparison of behavior modification with and without swaddling as interventions for excessive crying. *Journal of Pediatrics*, 149 (4): 512-517.

Vennemann, M.M., Bajanowski, T., Brinkmann, B., Jorch, G., Sauerland, C., Mitchell, E.A. & The German Sudden Infant Death Syndrome Study Group (2009) Sleep Environment Risk Factors for Sudden Infant Death Syndrome: The German Sudden Infant Death Syndrome Study. *Pediatrics*, 123 (4): 1162-1170.

Vennemann, M.M., Bajanowski, T., Brinkmann, B., Jorch, G., Yuecesan, K., Sauerland, C. & Mitchell, E.A. (2009) Does Breastfeeding Reduce the Risk of Sudden Infant Death Syndrome? *Pediatrics*, 123 (3): e406-410.

Vennemann, M.M., Hense, H.W., Bajanowski, T., Blair, P.S., Complojer, C., Moon, R.Y. & Kiechl-Kohlendorfer, U. (2012) Bed sharing and the risk of sudden infant death syndrome: can we resolve the debate? *Journal of Pediatrics*, 160 (1): 44-48.

Volpe, L.E., Ball, H.L. & McKenna, J.J. (2013) Nighttime parenting strategies and sleep-related risks to infants. *Social Science & Medicine*, Feb; 79: 92-100.

Von Kohorn, I., Corwin, M.J., Rybin, D.V., Heeren, T.C., Lister, G. & Colson, E.R. (2010) Influence of prior advice and beliefs of mothers on infant sleep position. *Archives of Pediatrics & Adolescent Medicine*, 164 (4): 363-369.

Von Kohorn, I., Nguyen, S.N., Schulman-Green, D. & Colson, E.R. (2012) A Qualitative Study of Postpartum Mothers' Intention to Smoke. *Birth*, 39 (1): 65-69.

Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Wagstaff, C. & Williams, B. (2014) Specific design features of an interpretative phenomenological analysis study. *Nurse Researcher*, 21 (3): 8-12.

Wagstaff, C., Jeong, H., Nolan, M., Wilson, T., Tweedlie, J., Phillips, E., Senu, H. & Holland, F. (2014) The Accordion and the Deep Bowl of Spaghetti: Eight Researchers' Experiences of Using IPA as a Methodology. *The Qualitative Report*. 19 (47): 1-15.

Ward, E., Miller, J., Graffy, J. & Bower, P. (2009) Contrasting approaches to recruitment in primary care research. *Primary Health Care Research and Development*, 10 (4): 368-373.

Ward, T. (2015) Reasons for mother-infant bed-sharing: a systematic narrative synthesis of the literature and implications for future research. *Maternal and Child Health Journal*, 19 (3): 675-690.

Welford, C., Murphy, K. & Casey, D. (2012) Demystifying nursing research terminology Part 2. *Nurse Researcher*, 19 (2): 29-35.

Westover, K. (2012) *Do Attitudes About Spoiling Children Affect Attitudes Regarding What Infants Need for Early Social-Emotional Development*. Unpublished MSc. dissertation. Logan: Utah State University.

Whiteside-Mansell, L., Nabaweesi, R., Caballero, A.R., Mullins, S.H., Miller, B.K. & Aitken, M.E. (2017) Assessment of Safe Sleep: Validation of the Parent Newborn Sleep Safety Survey. *Journal of Pediatric Nursing-Nursing Care of Children & Families*, 2017 (35): 30-35.

Whitley, R. & Kirmayer, L.J. (2008) Perceived stigmatisation of young mothers: An exploratory study of psychological and social experience. *Social Science & Medicine*, 66 (2): 339-348.

Williams, S.M., Mitchell, E.A. & Taylor, B.J. (2002) Are risk factors for sudden infant death syndrome different at night? *Archives of Disease in Childhood*, 87 (4): 274-278.

Williams, S.M., Taylor, B.J. & Mitchell, E.A. (1996) Sudden infant death syndrome: Insulation from bedding and clothing and its effect modifiers. *International Journal of Epidemiology*, 25 (2): 366-375.

Wilson, H. & Huntington, A. (2006) Deviant (M)others: The construction of teenage motherhood in contemporary discourse. *Journal of Social Policy*, 35 (1): 59-76.

Wolcott, H.F. (1999) *Ethnography: a Way of Seeing*. Lanham: AltaMira Press.

Wolfe, I., Macfarlane, A., Donkin, A., Marmot, M. & Viner, R. (2014) *Why children die: death in infants, children and young people in the UK. Part A*. [online] Available from: <http://www.rcpch.ac.uk/sites/default/files/page/Death%20in%20infants,%20children%20and%20young%20people%20in%20the%20UK.pdf> (Accessed: 10.1.15).

Woodhouse, S. (2015) Artwork from Leaflet 'Where might my baby sleep?' IN: Russell, C.K., Whitmore, M., Burrows, D. & Ball, H.L. (2015) 'Where might my baby sleep? Design and evaluation of a novel discussion tool for parent education.' *International journal of birth and parenting education*, 2 (2): 11-15.

Woodward, A., Douglas, R.M., Neil, M.H.G. & Miles, H. (1990) Acute respiratory illness in Adelaide children: breast feeding modifies the effect of passive smoking. *Journal of Epidemiology and Community Health*, 44 (3): 224-230.

Wu, T.W., Lien, R.I., Seri, I. & Noori, S. (2017) Changes in cardiac output and cerebral oxygenation during prone and supine sleep positioning in healthy term infants. *Archives of Disease in Childhood -Foetal and Neonatal Edition*, 102 (6): 483-489.

Yancey, A.K., Ortega, A.N. & Kumanyika, S.K. (2006) Effective Recruitment and Retention of Minority Research Participants. *Annual Review Public Health*, 2006 (27): 1-28.

Yardley, E. (2008) Teenage mothers' experiences of stigma. *Journal of Youth Studies*, 11 (6): 671-684.

Yardley, L. (2000) Dilemmas in qualitative health research. *Psychology & Health*, 15 (2): 215-228.

Yoder, J.D. & Kahn, A.S. (1992) Toward a feminist understanding of women and power. *Psychology of Women Quarterly*, 16 (1992): 381-388.

Yurdakok, K., Yavuz, T. & Taylor, C.E. (1990) Swaddling and acute respiratory infections. *American Journal Public Health*, 80 (7): 873-875.

Zhang, K. & Wang, X. (2013) Maternal smoking and increased risk of sudden infant death syndrome: A meta-analysis. *Legal Medicine*, 15 (3): 115-121.

Zundo, K. & Richards, E.A. (2017) Factors Associated with Parental Compliance with Supine Infant Sleep: An Integrative Review. *Pediatric Nursing*, 43 (2): 83-91.

APPENDICES

Appendix 1: Literature Search Strategy

PICO Grid				
	Population	Intervention	Comparison	Outcome
Key words	Infant or baby	Safe sleep Sleep position Sleep environment Sleep equipment	Control	SUDI Sudden infant death Sudden infant death syndrome SIDS Cot death Crib death
Key words	*Mother or *parent	Risk factors Prevention Safe sleep Birth weight Prematurity	Control	SUDI Sudden infant death Sudden infant death syndrome SIDS Cot death Crib death
Key words	Mother or *parent or teen *mother/*parent or adolescent *mother/*parent or young *mother/*parent	Smoking Alcohol Drug / substance	Control	Behaviour change/ Behaviour modification
		Epidemiology Environment Education/ Intervention Employment		SUDI Sudden infant death Sudden infant death syndrome SIDS Cot death Crib death

General Searches		
Subject:	Experience of Young mothers	Decision Making + *adolescent
*Teen *mother/*parent or adolescent *mother/*parent or young *mother/*parent	35	22

Database Searches		
Database	Search	Results
R= Relevant; NR=Not Relevant; D=Duplicate record		
MEDLINE	<p>*Sudden Infant Death/ep, pc [Epidemiology, Prevention & Control] + (abstracts and humans and yr="1995 - 2014")</p> <p>Subsequent searches including: *Infant + & *parent + smoking, alcohol, substance misuse, mental health, sleep environment, risk factors, parent awareness, parent attitude, child-care practice, educational interventions, media</p>	<p>1687 630 (R)</p>
ASSIA	<p>(Search limits: abstracts - "1995 – 2014" – humans) SUDI Cot death/ Crib death Safe Sleep Sudden Infant Death + Infant Sleep</p>	<p>4 – 1 (R) 20 – 8 (R) 4 – 1 (R) 173 – 103 (R) Total = 113 (R)</p>
CINAHL	<p>*Sudden Infant Death/ep, pc [Epidemiology, Prevention & Control] + (abstracts and humans and yr="1995 - 2014"; Age 0 – 23 months)</p> <p>Subsequent searches including: *Infant + & *parent + smoking, alcohol, substance misuse, mental health, sleep environment, risk factors and parent awareness, parent attitude, child-care practice, educational interventions, media returned previously identified results included in the 366 relevant articles.</p>	<p>764 366 (R)</p>
PsychINFO	<p>(Search limits: abstracts - "1995 – 2014" – humans) SUDI Cot death/ Crib death Safe Sleep Sudden Infant Death + Infant Sleep</p>	<p>0 20 – 8 (R/D) 7 – 1 (R/D) 214 – 20 (R/D) Total = 29 (R/D)</p>
Cochrane Database	<p>SUDI Smoking in pregnancy + parenthood Alcohol use in pregnancy + parenthood Substance use in pregnancy + parenthood Mental Health in pregnancy + parenthood Parenting (Educational Interventions)</p>	<p>0 22 (N/R) 11 (N/R) 4 (N/R) 20 (N/R) 303 – 25 (R) Total = 25 (R)</p>

Database Search Results				
	Returned	Selected	Duplicates removed	Abstracts
MEDLINE	1687	630	0	630
ASSIA	469	183	115	68
CINAHL	366	104	46	58
PsychINFO	214	20	14	6
Cochrane	360	25	0	0
Total:				762
Selected after reading complete article				316

Combined Search Results Categories					
Searched	2014	2018		2014	2018
Infant			Family & Environment		
Head Covering/Thermal Stress	5		Maternal & Obstetric Factors	5	
Pacifiers	6		Alcohol	5	
Swaddling	8		Drugs	6	
Feeding Method	11		Smoking	17	97
Immunisation	5		Mental Health	5	
Triple Risk Hypothesis	3		Young Motherhood	28	7
Sleep Environment			Parental Awareness	10	
Sleep Environment	9		Decision Making	20	2
Sleep Position	14		Epidemiology	18	
Sleep Equipment/ Soft Bedding	14		Media/ External Influences	5	
Risk Factors	11		Adolescent Brain Dev.		12
Co-sleeping/ Bed sharing	22		Policy & Guidance		
Time/ Place SIDS	5		Educational Interventions	8	
Other			Safe Sleep Campaigns	10	
Grey literature		1	Policy Documents	10	
Thesis	1	2	Professionals roles	1	
Total	168	3	Total	148	118
Total in 2014 = 316			Total in 2018 = 121		

Appendix 2: Ethics Approval Letter

North of Scotland Research Ethics Service

Summerfield House
2 Eday Road
Aberdeen
AB15 6RE

Telephone: 01224 558458
Facsimile: 01224 558609
Email: nosres@nhs.net



Please note: This is the favourable opinion of the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval

17 August 2016

Ms Catherine Ellis
Senior Lecturer & Consultant Nurse Child Health
Coventry University
Faculty of Health & Life Sciences
Priory St
COVENTRY
CV1 5FB

Dear Ms Ellis

Study title: Safely Sleeping? An exploration of mother's understanding of safe sleep practices and factors that influence reducing risks in their infant's sleep environment.
REC reference: 16/NS/0087
Protocol number: REGO-2016-1808
IRAS project ID: 160040

Thank you for your letter of 17 August 2016, responding to the Proportionate Review Sub-Committee's request for changes to the documentation for the above study.

The revised documentation has been reviewed and approved by the Alternate Vice-Chair.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this favourable opinion letter. The expectation is that this information will be published for all studies that receive an ethical opinion but should you wish to provide a substitute contact point, wish to make a request to defer, or require further information, please contact the REC Manager Mrs Carol Irvine, nosres@nhs.net. Under very limited circumstances (e.g. for student research which has received an unfavourable opinion), it may be possible to grant an exemption to the publication of the study.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised.

Appendix 3: HRA Approval Letter



Health Research Authority

Ms Catherine Ellis
Senior Lecturer & Consultant Nurse Child Health
Coventry University
Faculty of Health & Life Sciences Priory St
Coventry CV1 5FB
10 November 2016

Email: hra.approval@nhs.net

Dear Ms Ellis,

Study title:	Safely Sleeping? An exploration of mother's understanding of safe sleep practices and factors that influence reducing risks in their infant's sleep environment.
IRAS project ID:	160040
Protocol number:	REGO-2016-1808
REC reference:	16/NS/0087
Sponsor	University of Warwick

I am pleased to confirm that **HRA Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

Appendix B provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read *Appendix B* carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

It is critical that you involve both the research management function (e.g. R&D office) supporting each organisation and the local research team (where there is one) in setting up your study. Contact details and further information about working with the research management function for each organisation can be accessed from www.hra.nhs.uk/hra-approval.

Appendices

The HRA Approval letter contains the following appendices:

- A – List of documents reviewed during HRA assessment
- B – Summary of HRA assessment

After HRA Approval

The document “*After Ethical Review – guidance for sponsors and investigators*”, issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics and is updated in the light of changes in reporting expectations or procedures.

In addition to the guidance in the above, please note the following:

- HRA Approval applies for the duration of your REC favourable opinion, unless otherwise notified in writing by the HRA.
- Substantial amendments should be submitted directly to the Research Ethics Committee, as detailed in the *After Ethical Review* document. Non-substantial amendments should be submitted for review by the HRA using the form provided on the HRA website and emailed to hra.amendments@nhs.net.
- The HRA will categorise amendments (substantial and non-substantial) and issue confirmation of continued HRA Approval. Further details can be found on the HRA website.

Scope

HRA Approval provides an approval for research involving patients or staff in NHS organisations in England. If your study involves NHS organisations in other countries in the UK, please contact the relevant national coordinating functions for support and advice. Further information can be found at <http://www.hra.nhs.uk/resources/applying-for-reviews/nhs-hsc-rd-review/>. If there are participating non-NHS organisations, local agreement should be obtained in accordance with the procedures of the local participating non-NHS organisation.

User Feedback

The Health Research Authority is continually striving to provide a high-quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known, please email the HRA at hra.approval@nhs.net. Additionally, one of our staff would be happy to call and discuss your experience of HRA Approval.

HRA Training

We are pleased to welcome researchers and research management staff at our training days – see details at <http://www.hra.nhs.uk/hra-training/>

Your IRAS project ID is **160040**. Please quote this on all correspondence.

Yours sincerely

Alex Thorpe

Senior Assessor

Email: hra.approval@nhs.net

Appendix 4: NHS Hospital Trust Research Permission

Dear Catherine,

RE: IRAS 167159 Confirmation of Capacity and Capability at University Hospitals Coventry & Warwickshire NHS Trust

Full Study Title: Safely sleeping? An exploration of mother's understanding of safe sleep practices and factors that influence reducing risks in their infant's sleep environment.

UHCW RD&I Ref: CE175816

IRAS ID: 160040

This email confirms that University Hospital Coventry and Warwickshire NHS TRUST has the capability and capacity to deliver the above study. As confirmation of our capability and capacity please find attached the approved statement of activities.

It has been agreed that recruitment at this site may commence on **18/11/2016** which is the date listed on the attached statement of activities.

You are requested to inform RD&I@uhcw.nhs.uk of the date you recruit your first patient.

The Following documents are permitted for use within the site file, as per the HRA review:

Document	Version	Date
Research Protocol	1.0	10/06/2016
Interview schedules or topic guides for participants [Interview Schedule 1]	2.0	10/08/2016
Interview schedules or topic guides for participants [Interview Schedule 2]	2.0	10/08/2016
Interview schedules or topic guides for participants [Interview Schedule 2]	2.0	10/08/2016
Participant Consent form	1.0	10/06/2016
Participant Information sheet	2.0	10/08/2016

May I take this opportunity to remind you that, as a researcher, you must ensure that your research is conducted in a way that protects the dignity, rights, safety and well-being of participants. Confirmation of capacity and capability at UHCW NHS Trust assumes that you have read and understand the Research Governance Framework and accept that your responsibilities as a researcher are to comply with it, the Data Protection and Health & Safety Acts.

If you wish to discuss further or have any queries, please do not hesitate to contact me. We look forward to hosting this research within our organisation.

Very best wishes,
Sonia.

Sonia Kandola
Research Governance Associate

Appendix 5: Fieldwork Timetable

Field work timetable												
	2016	2017										
TASK	December	January	February	March	April	May	June	July	August	September	October	
Ethics Approval 17.8.16												
HRA Approval 10.11.16												
Data Collection												
Brief recruitment midwives / iBumps	B			B			B			B		
Identify participants sheets	Info sheet											
Recruitment												
Interview 1 @ 32 - 37 weeks	Interview 1	Interview 1 x 2										
Interview 2 @ 4 weeks PN					Interview 2	Interview 2						
Interview 3 @ 16 weeks PN								Interview 3				
Supervision meetings	S	S	S	S	S	S		S		S		
Annual Report to NRES												
	2017	2018										
Data Collection & Analysis	November	December	January	February	March	April	May	June	July	August	September	
Sabbatical												
Brief recruitment midwives / iBumps												
Identify participants												
Recruitment												
Interview 1 @ 32 - 37 weeks	Interview 1					Interview 1						
Analysis of individual 1st interviews				Analysis 1 (Individual) >								
Interview 2 @ 4 weeks PN		Interview 2					Interview 2					
Analysis of individual 2nd interviews						Analysis 2 (Individual) >						
Interview 3 @ 16 weeks PN					Interview 3							
Analysis of individual 3rd interviews							Analysis 3 (Individual) & across group >					
Supervision meetings	S	S	S			S	S	S	S		S	
Annual Report to NRES												

Appendix 6: Participant Information Sheet



PARTICIPANT INFORMATION SHEET

Study Title: *Safely Sleeping?*

*An exploration of mothers' understanding of safe sleep and
reducing risks in their infant's sleep environment.*

Investigator: *Catherine Ellis*

Introduction

You are invited to take part in a research study that I am doing as part of a university course. Please read this information carefully, it tells you the purpose of the study and what will happen if you take part. Please ask us if you would like more information. Details of how to get involved are given at the end of this information sheet.

What is the study about?

Most parents know that a baby's sleep position is important in keeping a baby safe and lowering the risk of sudden infant death. There are other things that can increase risks to babies during pregnancy and in the first few months of life that seem to be less well known. While midwives and health visitors are able to discuss with parents how they look after their baby, sometimes the information that parents are given by health care workers and others can be confusing or overwhelming. I would like to meet with first time mothers to talk to them about what they know about caring for their baby during sleep and how they make those decisions. The information I gather will help health care workers to find better ways to provide more helpful information for new parents.

Do I have to take part?

This is your decision. You have the choice to participate or not, or if you change your mind, you are free to withdraw at any time, without giving a reason. This will not affect you or the health care you receive in any way.

What will happen to me if I take part?

I will come to your home, or meet you where you choose, at a time convenient for you. I will talk to you about your preparation for your baby and what you know about keeping baby's safe during sleep. I will want to meet with you three times and each interview will last about 1 – 1 1/2 hours.

Interview 1: will be when you are between 32 – 35 weeks pregnant.

Interview 2: will be around 4 weeks after your baby's birth.

Interview 3: will be around 4 months after your baby's birth.

With your permission, I will also be in contact with your community midwife around the time of your baby's birth, so I know when you have had your baby.

What are the possible disadvantages, side effects, risks, and/or discomforts of taking part in this study?

The study involves three interviews; the only inconvenience is your time.

What are the possible benefits of taking part in this study?

By taking part in this study, you will be helping us to understand more about how mothers make decisions about how their babies sleep. This will help health care workers to provide better support to parents.

Expenses and payments

To say 'thank you' for giving up your time to participate in this study, a high street voucher worth £10.00 will be offered for each interview. Any travel costs you have paid out will be refunded at the time of each interview.

What will happen when the study ends?

Once the three interviews have finished, your participation ends. I will write a report on what I have found out during the study. If you would like to receive a summary of the report, I will send you a copy.

Will my taking part be kept confidential?

Yes. We will follow strict ethical and legal practice and all information about you will be handled in confidence. You will not be identified as a participant in the study.

When you first agree to take part, you will provide me with your contact details. This information will only be used to contact you for arranging interviews. The information will be kept securely with your interview consent forms and will only be accessed by my supervisor and me. I will record and type each interview; this information will be stored on a secure computer file and an ID number used to protect your confidentiality. I will use some of what you say as quotes in my written reports and some publications, but no information about you will be identifiable. At the end of the study, all of the personal information you have given me will be destroyed.

What if the researcher becomes concerned about something you tell her during the study?

During the interviews something may come up in conversation or is observed that is of concern to you or me. In some cases, I might have to let another professional know about that concern and will discuss this with you. An example might be if you are showing early signs that you might be depressed and have not spoken to your GP or health visitor, or if there are concerns about the safety of a child. I will also ensure that you get the right support if any concerns are raised.

Who is organising and funding the study?

I am a PhD student and this study is part of my University course. This study is not funded by any external organisation.

What will happen if I don't want to carry on being part of the study?

Participation in this study is voluntary. I will ask you to sign a consent form each time we start an interview to check you are still happy to participate. If you have changed your mind, you can withdraw from the study at any time without it affecting you in any way. If you withdraw from the study, any information you have given me up to that point will be used in the study unless there is a particular reason to discount the information.

What if there is a problem?

Any complaint about the way you have been dealt with during the study or any possible harm you might have suffered will be addressed. This study has insurance cover by the University of Warwick. If you have an issue, please contact myself, or my supervisor Dr Peter Sidebotham, or to make a formal complaint, the Director of Delivery Assurance who is a Senior University of Warwick official entirely independent of this study:

Director of Delivery Assurance

Registrar's Office
University House
University of Warwick
Coventry. CV4 8UW

Will my taking part be kept confidential?

Yes.

What will happen to the results of the study?

The results of the study will be written up to produce my PhD thesis. I aim to publish different parts of the work from the study in professional journals and present some aspects of the work at professional conferences. I also aim to present the findings to health care professionals working with children and families. Participants will be offered a summary of what I have found out during the study.

Who has reviewed the study?

This study has been reviewed and given a favourable opinion by North of Scotland Research Ethics Service. REC Reference: 16/NS/0087 on 17th August 2016.

What if I want more information about the study?

If you have any questions about any aspect of the study or your participation in it, which have not been answered by this participant information leaflet, please contact:

Researcher	Research Supervisor
Catherine Ellis	Dr Peter Sidebotham
c.ellis.1@warwick.ac.uk	p.sidebotham@warwick.ac.uk
Office: 024 7765 3816 Mobile: 07855 055154	024 7657 4878
Coventry University Health & Life Sciences Priory Street Coventry CV1 5FB	Warwick Medical School Gibbet Hill Coventry CV4 7AL

What to do next: If you would like to participate in this study, you can either:

1. Contact me, Catherine Ellis, by e-mail, phone, text or by post (information in the box above), when you receive this from your midwife, or
2. Let your midwife know you would like to participate in the study, and I will come with her to your next appointment to introduce myself and talk to you about the research.

Thank you for taking the time to read this participant information leaflet

Appendix 7: Participant Research Registration Consent Form

PARTICIPANT RESEARCH REGISTRATION CONSENT FORM

Study Number: 16/NS/00087

Patient Identification Number for this study: Initial Consent: ID

Title of Project: *Safely Sleeping? An exploration of mother's understanding of safe sleep practices and factors that influence reducing risks in their infant's sleep environment.*

Name of Researcher: Catherine Ellis

Please initial all boxes

1. I confirm that I have read and understand the information sheet (16/NS/00087: 17.8.16) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical rights being affected. ☐
3. I understand that data collected during the study may be looked at by individuals from The University of Warwick or from regulatory authorities, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ☐
4. I understand that if I withdraw from the study, any data collected up to that point, will be used in the overall data analysis. ☐
5. I agree to take part in the above study. ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Catherine Ellis	Date	Signature
Researcher		

Participant Details

Name:

Age:

Address:

Telephone:

Preferred method of contact:

Name of Midwife/ Family Nurse/ Service Provider:

Telephone Midwife/ Family Nurse:

EDD:

Date of birth of Baby:

Completed Interviews:

Interview	Date	Consent form signed	Voucher given	Summary report requested
1				
2				
3				

Pseudonym assigned:

Mother

Infant

Appendix 8: Participant Interview Consent Form

PARTICIPANT CONSENT FORM

Study Number: 16/NS/0087

Patient Identification Number for this study: Interview 1: ID001

Title of Project: *Safely Sleeping? An exploration of mother's understanding of safe sleep practices and factors that influence reducing risks in their infant's sleep environment.*

Name of Researcher: Catherine Ellis

*Please initial
all boxes*

6. I confirm that I have read and understand the information sheet (16/NS/0087: 17.8.16) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
7. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical rights being affected. ☐
8. I understand that data collected during the study may be looked at by individuals from The University of Warwick or from regulatory authorities, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ☐
9. I understand that if I withdraw from the study, any data collected up to that point, will be used in the overall data analysis. ☐
10. I agree to take part in the above study. ☐

_____ Name of Participant	_____ Date	_____ Signature
_____ Receipt of £10 voucher	_____ Date	_____ Signature
_____ Catherine Ellis Researcher	_____ Date	_____ Signature

Appendix 9: Antenatal Interview Topic Guide

Safely Sleeping?

An exploration of mothers' understanding of safe sleep practices and reducing risks in their infant's sleep environment.

- What is the lived experience of a young mother?
- What do mother's understand about what constitutes safe sleep?
- What influences decision-making around infant-care?

Introduction

Aim: Introduce the research and set the context for the discussion

- Introduce self
- Introduce the study,
 - Purpose of study
 - How long the interview takes
 - Participation is voluntary, participant's right to withdraw
 - Recording of the interview, reasons and consent
- Confidentiality, how your information will be used, reporting of findings
- 'Thank you' £10.00 gift voucher offered
- Any questions

1. Background and personal circumstances

Aim: To introduce the respondent, personal characteristics

- Age
- Household circumstances
- Brief family background
- What are your main daytime activities?
- Income/ benefits
- What is it like living in this area?
- Are there other young mothers in the area?
- Can you access the facilities and services you need/ want?

2. Becoming a mother

Aim: To understand the emotional and physical impact on the respondent

- What does becoming a mother mean to you?
- Do you have any experience of caring for babies or young children?
- What have others told you about pregnancy & motherhood?
- Physical preparation –
 - Have you bought things for the baby?
 - What have you bought?
 - Where did you buy these items?
 - Have people lent you baby equipment?
 - Have you been given gifts for the baby?

3. Health education messages

Aim: To understand the extent and relevance of health education messages for the respondent

- What health education messages do you already know about related to baby care?
- What new information have you learned during your pregnancy?
 - Who has provided you with the most useful information?
- What do you already know about keeping your baby safe during sleep?
- What do you think about infant safe sleep advice?
- Have you altered your behaviour in any way after receiving information?
 - If yes how and why?
 - If not, how did you decide that?

4. Sources of information & advice

Aim: To understand the range, quality and reliability of information sources

- Where/ who have you had information from?
- Why have you used these sources?
- Do you know of anywhere else that new parents can get advice and information?
- Do you think all sources of information be trusted?
 - If not, what are your reasons for this?
- Have you got enough information to make decisions about caring for your baby safely?

5. Intentions of parenting in the first weeks

Aim: To understand the infant care intentions of the respondent and what has influenced you

- Have you made decisions about?
 - Personal lifestyle changes, routines, smoking etc.?
 - Have you decided where your baby will sleep?
 - At night
 - During the day
 - What sleep position you will choose?
 - What do you think about sleeping with your baby?
 - Have you thought about plans for sleeps away from home?
 - Have you thought about how you will feed your baby?
- Who would you expect to help you with caring for your baby after birth?
- What do you think life after the birth of your baby will be like, thinking about the following?
 - Sleep
 - Health
 - Personal time
 - Relationship
 - Social life, friends & family

6. Suggestions

Aim: Give respondent opportunity to suggest anything that could be improved with information sharing about safe sleep advice, a wish list

- Is there anything you can think of you would like to add?

Close

Round up discussion and check for questions; Stop recording; Reassure about confidentiality and anonymity; Check communication plan for next interview and leave contact details.

Thank you £10 gift voucher: sign receipt

Appendix 10: 1st Postnatal Interview Topic Guide

Safely Sleeping?

An exploration of mothers' understanding of safe sleep practices and reducing risks in their infant's sleep environment.

- What is the lived experience of a young mother?
 - What do mother's understand about what constitutes safe sleep?
 - What influences decision-making around infant-care?
-

Introduction

Aim: Reminder about the purpose of the research and set the context for this discussion

- Introduce self
- Reminder of what the study it is about
 - Purpose of this interview in relation to the last interview
 - How long the interview will take
 - Participation is voluntary, participant's right to withdraw
 - Recording of the interview, reasons and consent
- Confidentiality, how your information will be used, reporting of findings
- 'Thank you' £10.00 gift voucher offered
- Any questions

1. Background and personal circumstances

Aim: Review of personal circumstances, have there been any changes since the first interview (except new baby)

- Household circumstances – any changes?
- Income – any changes?

2. Becoming a mother

Aim: To understand the emotional and physical impact on the respondent from the A/N to P/N transition

- What does that mean for you now – has that changed from before birth?
- What others told you about becoming a mother; was that information useful, realistic and helpful?
 - If yes, why?
 - If no, why?

3. Health education messages

Aim: To understand the extent and relevance of health education messages for the respondent

- What do you remember from A/N information about caring for your baby?
- What do you think about that information now?
- What health education information have you had since your baby was born?
- Have you altered your behaviour in any way after receiving information?
 - If yes how and why?
 - If not, how did you decide that?
- Which information is helpful?
- Which information has not been helpful?

4. Sources of information & advice

Aim: To understand where women seek information and how they decide which information is useful/helpful

- Who has given you the most useful information?
- Who do you trust to give you good advice?
- What other sources of information and advice have you used?
 - Why have you used these sources?
- Where else can new parents get advice and information?
- Do you think all sources of information can be trusted?
- Have you got enough information to make decisions about safe infant care?
- What other information would you have liked:

5. Intentions compared to the reality of parenting in the first weeks

Aim: To understand the infant care intentions of the respondent compared to the reality of child-care activity and the sleep environment

Since the birth of your baby

- Have you made changes you did not think you would? If yes,
 - What changes did you make?
 - What was your motivation/ basis for this?
- In the previous 24 hours, where did your baby sleep:
 - At night
 - During the day
 - Out of home
- In the reality of caring for your baby now, compared to what you thought you would do, have your views changed on (give reasons for each change):
 - Sleep position?
 - Sleeping with your baby?
 - Your feeding choice?
 - Plans for sleeps away from home?
 - Are you planning to have your baby immunised?
- Who has helped you with caring for your baby since birth?
- How has the birth of your baby affected you, thinking about the following?
 - Sleep
 - Health
 - Personal time
 - Relationship
 - Social life, friends & family

6. Suggestions

Aim: Give respondent opportunity to suggest anything that could be improved with information sharing about safe sleep advice, a wish list

Close

Round up discussion and check for questions; Stop recording; Reassure about confidentiality and anonymity; Check communication plan for next interview and leave contact details.
Thank you £10 gift voucher: sign receipt

Appendix 11: 2nd Postnatal Interview Topic Guide

Safely Sleeping?

An exploration of mothers' understanding of safe sleep practices and reducing risks in their infant's sleep environment.

- What is the lived experience of a young mother?
- What do mother's understand about what constitutes safe sleep?
- What influences decision-making around infant-care?

Introduction

Aim: Reminder about the purpose of the research and set the context for this discussion

- Introduce self
- Reminder of what the study it is about
 - Purpose of this interview in relation to the last interview
 - How long the interview will take
 - Participation is voluntary, participant's right to withdraw
 - Recording the interview, reasons and consent
- Confidentiality, how your information will be used, reporting of findings
- 'Thank you' £10.00 gift voucher offered
- Any questions

1. Background and personal circumstances

Aim: Review of personal circumstances, have there been any changes since the last interview

- Household circumstances – any changes?
- Income – any changes?

2. Being a mother

Aim: To understand the emotional and physical impact on the respondent from the last interview

- What does being a mother mean to you now?

3. Health education messages

Aim: To understand the extent and relevance of health education messages for the respondent

Thinking about health education information you received during pregnancy and the early postnatal period,

- What do you remember about that information?
- What do you think about that information now?
- What health education information have you had since our last interview?
- Have you altered your behaviour in any way after receiving information?
 - If yes how and why?
 - If not, how did you decide that?

4. Sources of information & advice

Aim: To understand where women seek information and how they decide which information is useful/helpful

Thinking about the information and advice you received after the baby was born,

- Who have you had most useful information from since our last interview?
- Who do you trust to give you good advice?
 - Has this changed?
- Have you found any new sources of information since our last interview?
 - List them
- Why have you used these sources?
- Do you think all sources of information can be trusted?
- Have you got enough information to make decisions about caring for your baby safely?
- What other information would you have liked:
 - Who from?
 - When?
- Have you established a supportive network for advice and information?

5. Intentions compared to the reality of parenting over time (at 16 weeks)

Aim: To understand the infant care intentions of the respondent compared to the reality of child-care activity and the sleep environment over time

- Since our last interview
 - Have you made changes you did not think you would?
 - What changes did you make?
 - What was your motivation/ basis for this?
 - In the previous 24 hours, where did your baby sleep:
 - At night
 - During the day
 - Out of home
 - In the reality of caring for your baby now, compared to what you thought you would do, or what you did at our last interview, have your views changed on
 - Sleep position?
 - Sleeping with your baby?
 - Your feeding choice?
 - Plans for sleeps away from home?
 - Have you had your baby immunised?
- Who has helped you with caring for your baby since our last interview?
- Now your baby is getting older, how does this effect you, thinking about the following:
 - Sleep
 - Health
 - Personal time
 - Relationship
 - Social life, friends & family

6. Suggestions

Aim: Give respondent opportunity to suggest anything that could be improved with information sharing about safe sleep advice, a wish list

- Is there anything you can think of you would like to add?

Close

Round up discussion and check for questions; Stop recording; Reassure about confidentiality and anonymity; Check communication plan for next interview and leave contact details.

Thank you £10 gift voucher: sign receipt

Appendix 12: Interview Prompt Pictures

(Reproduced with permission from Russell et al, 2015)



Appendix 13: PhD Education & Training Courses

Content	Date	Provider
PhD Induction Day	6.2.14	Warwick University
Working effectively with your supervisor	6.3.14	Warwick University
Becoming an Effective Researcher	17.3.14	Warwick University
Poster Design	27.3.14	Coventry University
Effective Literature Searching	8.5.14	Warwick University
IPA Methodology workshop	16.5.14	Aston University
Advanced Literature Searching	22.5.14	Warwick University
Ethics Workshop	4.6.14	Coventry University
Endnote	6.6.14	Warwick University
In-Depth Interview Skills	2 & 3.12.14	NatCen Social Research
Qualitative Data Analysis	10 & 11.2.15	NatCen Social Research
Researcher Safety	10.4.15	Coventry University
Research Governance (GCP – primary care)	11.6.16	NIHR
Writing for Academic Publication	15.12.16	Coventry University
Crafting a Research Article	11.1.17	Coventry University
IPA Advanced Analysis and Writing up Findings Workshop	1.12.17	Caledonia University
Preparation for thesis submission	15.5.18	Warwick University

Appendix 14: Seminars & Conferences Attended

Conferences Attended (* = presented)		
*Research Symposium - poster	15.4.14	Coventry University
Research Symposium	21.5.14	Warwick University
ISPID Conference Amsterdam	18 - 22.9.14	Amsterdam University
*Research Symposium - poster	17.4.15	Coventry University
*Warwick Symposium - poster	7.5.15	Warwick University
*Research Symposium - presentation	15.4.16	Coventry University
*International IPA Conference Glasgow - poster	18 - 19.5.17	Caledonia Glasgow University
*Warwick Research Symposium - poster	7 – 8.6.17	Warwick University
*BASPCAN International Congress 2018 - presentation	10.4.18	Warwick University
Warwick Research Symposium	22-23.5.18	Warwick University
*ISPID International Conference 2018 - presentation	7-9.6.18	Glasgow University
Seminars		
Ski helmet use in school children	12.2.14	Coventry University
Schoolchildren & obesity project	12.3.14	Coventry University
Indicators for prolonged breastfeeding	15.4.14	Coventry University
IPA: Dementia talking tools	8.5.14	Coventry University
Childhood Education Inequality	12.5.14	Coventry University
Child Welfare Inequalities	30.6.14	Coventry University
Bowel Cancer screening	20.11.14	Warwick University
HOPE project	11.12.14	Coventry University
*Safely Sleeping? Project - presented	19.1.15	Coventry University
Exploring and Explaining Childhood Inequalities: Lines of Enquiry	12.5.15	Coventry University
School based interventions to promote physical activity and healthy weight in children in Coventry	15.5.15	Coventry University
Technology Enabled Research	12.10.15	Coventry University
Interconnecting social divisions: How men with learning disabilities understand disability, poverty and gender impacting on their health	26.11.15	Coventry University

Successful collaboration and engagement to improve health care and outcomes for women and children in the East Midlands	13.1.16	Coventry University
Traditional Chinese Medicine vs. Western Medicine	7.3.16	Coventry University
Placebo, performance and the healing response	10.3.16	Coventry University
Exploring the views and personal experiences of mothers and young people with long term enteral feeding	7.4.16	Coventry University
Publishing in quality journals	19.4.16	Coventry University
Is decision consistency in child welfare achievable without reversion to technical – rational approaches?	14.7.16	Coventry University
'The Essential Structure of Evidenced Based Practice' Dr Simon Igo.	14.9.16	Coventry University
'Developing, Evaluating and Disseminating Digital Behaviour Change Interventions' Dr Leanne Morrison	27.9.16	Coventry University
'Priorities for Behaviour Change Research & Intervention Development' Prof. Falko Sniehotter	29.11.16	Coventry University
The WellChild In-depth review and implications for practice/CFR Dr Alex Toft/Professor Jane Coad	23.1.17	Coventry University

Appendix 15: Abstract for BASPCAN Congress, 10th April 2018

Title: *Young Mothers: You Get' That Look'*

Aim: To understand young mothers' experiences of and perspective on motherhood.

Background: The social construct of young motherhood is typically negative; young mothers are often grouped together and viewed as a social problem, unprepared for the parental role. Poor outcomes are noted for their infants and children ranging from poor health and educational achievement to experiencing abuse and neglect and being more likely to experience infant death.

Method: As part of a qualitative, phenomenological PhD research project, a structured search of five databases was conducted to identify relevant literature pertaining to teenage pregnancy, teen mothers and the lived experience of young mothers. Selected quantitative and qualitative literature, and policy documents were subject to critical appraisal using relevant critical appraisal checklists.

Findings: The negative social construction of young mothers, which influence social policy and service provision, is drawn largely from quantitative research. However, an emerging qualitative perspective provides a counter to these negative stereotypes. The review of the qualitative literature identified several key themes from the perspective of the young mother: 1. Young mothers are not a homogenous group, 2. Young mothers experience high levels of criticism from both the public and professionals which increases stress for them, and 3. Parenting has to be of a higher standard than for older mothers. Professionals, for a variety of reasons, may not consider the perspective of the young mother, perceiving them as high-risk and difficult to engage.

Conclusions: Understanding what life is like for these young women can improve the level of engagement from young mothers. When young mothers and professionals have a 'shared horizon', outcomes for their children can improve.

Appendix 16: Abstract for ISPID International Conference, 8th June 2018

Title: *Young Mothers: Their perceptions of risk for SIDS and associated infant-care practices*

Background: The social construct of young motherhood is typically negative; young mothers are often grouped together and viewed as a social problem, unprepared for the parental role. Poor outcomes are noted for their infants and children ranging from poor health and educational achievement to experiencing abuse and neglect and being more likely to experience infant death. Research has identified that young mothers are at increased risk for SIDS and they are more likely to expose their infants to increased risks in the sleep environment, despite the availability of health education programs.

Objectives: To understand young mothers' perceptions of safe sleep information and increased risk for SIDS, and their perspective of translating knowledge of risk into the infant sleep environment.

Method: As part of a qualitative, phenomenological PhD research project, five young mothers engaged in serial interviews about their experience of becoming a mother. Three interviews, conducted during the ante (1) and postnatal (2) period, illuminated their knowledge and understanding of risk for SIDS, how they translated that knowledge into the infant sleep environment, and what factors influenced their infant-care practices.

Findings: Key themes have begun to emerge from initial analysis: 1. Reactive parenting, 2. Safe sleep information is incomplete, unclear or causes confusion, 3. The infant is required to 'fit into' the life of the young mother, and 4. Infant-care practices demonstrated increased risk between the 4th and 16th postnatal week.

Conclusions: Consideration of these themes may offer a fresh perspective for health professionals when discussing risk reduction for SIDS with young mothers. Understanding what life is like for these young women may improve their level of engagement with professionals and when young mothers and professionals have a 'shared horizon', outcomes for their children can improve.